

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

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Benjamin J. Griffin  
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MAR 14 2003

Federal Communications Commission  
Office of Secretary

March 14, 2003

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
455 12th Street, S.W.  
Washington, D.C. 20554

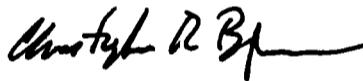
Re: File No. SAT-PDR-20020823-00161

Dear Ms. Dortch:

On behalf of Spacecom Satellite Communications Services S.C.C. Ltd., enclosed please find an original and four copies of a Supplement to Petition for Declaratory Ruling to add the AMOS-2 satellite at 4° W.L. to the Commission's Permitted Space Station List, File No. SAT-PDR-20020823-00161. Also enclosed is an additional copy, which we ask you to date stamp and return with our messenger.

Please do not hesitate to contact the undersigned with any questions you may have regarding this petition.

Sincerely,



Benjamin J. Griffin  
Christopher R. Bjornson

Counsel for Spacecom Satellite  
Communications Services S.C.C. Ltd.

Enclosures

cc: Jay Whaley

WDC 328635v1

Washington Boston New York Reston New Haven

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of )  
 )  
Spacecom Satellite Communications )  
Services S.C.C. Ltd. )  
 )  
Petition for Declaratory Ruling to Add )  
Spacecom Satellite Communications )  
Services Ltd. AMOS-2 Satellite )  
At 4° W.L. to the Commission's )  
Permitted Space Station List )

File No. SAT-PDR-20020823-00161

**RECEIVED**

MAR 14 2003

Federal Communications Commission  
Office of Secretary

To: International Bureau

**SUPPLEMENT TO PETITION FOR DECLARATORY RULING**

Spacecom Satellite Communications Services S.C.C. Ltd. ("Spacecom"), by counsel and pursuant to Section 25.137 of the Commission's rules and the *DISCO II First Reconsideration Order*,<sup>1/</sup> hereby respectfully requests that the Commission add the AMOS-2 satellite at 4° W.L. to the Commission's Permitted Space Station List, for the provision of services to and from the United States covered by the World Trade Organization's Basic Telecommunications Agreement ("WTO Basic Telecom Agreement") and supplements its Petition for Declaratory Ruling filed on August 23, 2002, File No. SAT-PDR-20020823-00161.

Spacecom files this supplement to clarify that it seeks permission for the AMOS-2 satellite to receive transmissions from U.S. uplink earth stations in the 14.0-14.5 GHz

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<sup>1/</sup> Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States, IB Docket No. 96-111, *First Order on Reconsideration*, FCC 99-325, 15 FCC Rcd 7207 (rel. Oct. 29, 1999) ("*DISCO II First Reconsideration Order*").

band and transmit to U.S. receive earth stations in the 11.45-11.7 band (“Ku-band”).<sup>2/</sup> To the extent U.S.-licensed earth stations have an “ALSAT” designation and communicate with AMOS-2 in the conventional Ku-band frequencies, such earth stations would be permitted to communicate with AMOS-2 without further authorization once AMOS-2 is placed on the Permitted Space Station List. Although AMOS-2 also will operate in the “extended” Ku-band frequencies (13.75-14.0 GHz and 11.45-11.7 GHz), Spacecom understands that any U.S. earth station wishing to transmit in the extended Ku-band uplink frequencies would need to modify its license on a case-by-case basis in order to obtain authorization to do so. In addition, any proposed downlinks in the extended Ku-band would be for international services only, and only as permitted by the Commission’s Rules.

Attached to this supplement are gain contour plots and antenna radiation patterns illustrating the technical aspects of the satellite operations of AMOS-2.

As documented herein and in its previous filing, AMOS-2 satisfies all legal and technical requirements for U.S. service. Furthermore, access by all U.S. earth stations with an ALSAT designation to AMOS-2 would produce substantial public interest benefits. As stated previously, AMOS-2 will enhance Spacecom’s transatlantic offerings by providing U.S. earth station operators with a greater range of space station service choices and more capacity. The expansion of capacity available to the U.S. market will stimulate lower prices, improve service quality, increase service options and foster technological innovation.

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<sup>2/</sup> Spacecom does not seek authority to provide Direct-to-Home service, Direct Broadcasting Service or Digital Audio Radio service in the United States.

Therefore, for the reasons set out above, Spacecom respectfully requests that the Commission issue a declaratory ruling adding the AMOS-2 satellite to the Permitted Space Station List.

**Respectfully Submitted,**

**Spacecom Satellite  
Communications Services S.C.C.  
Ltd.**



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Benjamin J. Griffin  
Christopher R. Bjornson  
**MINTZ, LEVIN, COHN, FERRIS,  
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March 14, 2003

WDC 327069v1



# AMOS-2

## SYSTEM DESIGN REVIEW (SDR)

### Antenna radiation Patterns





## **DGA EIRP & G/T contour plots**

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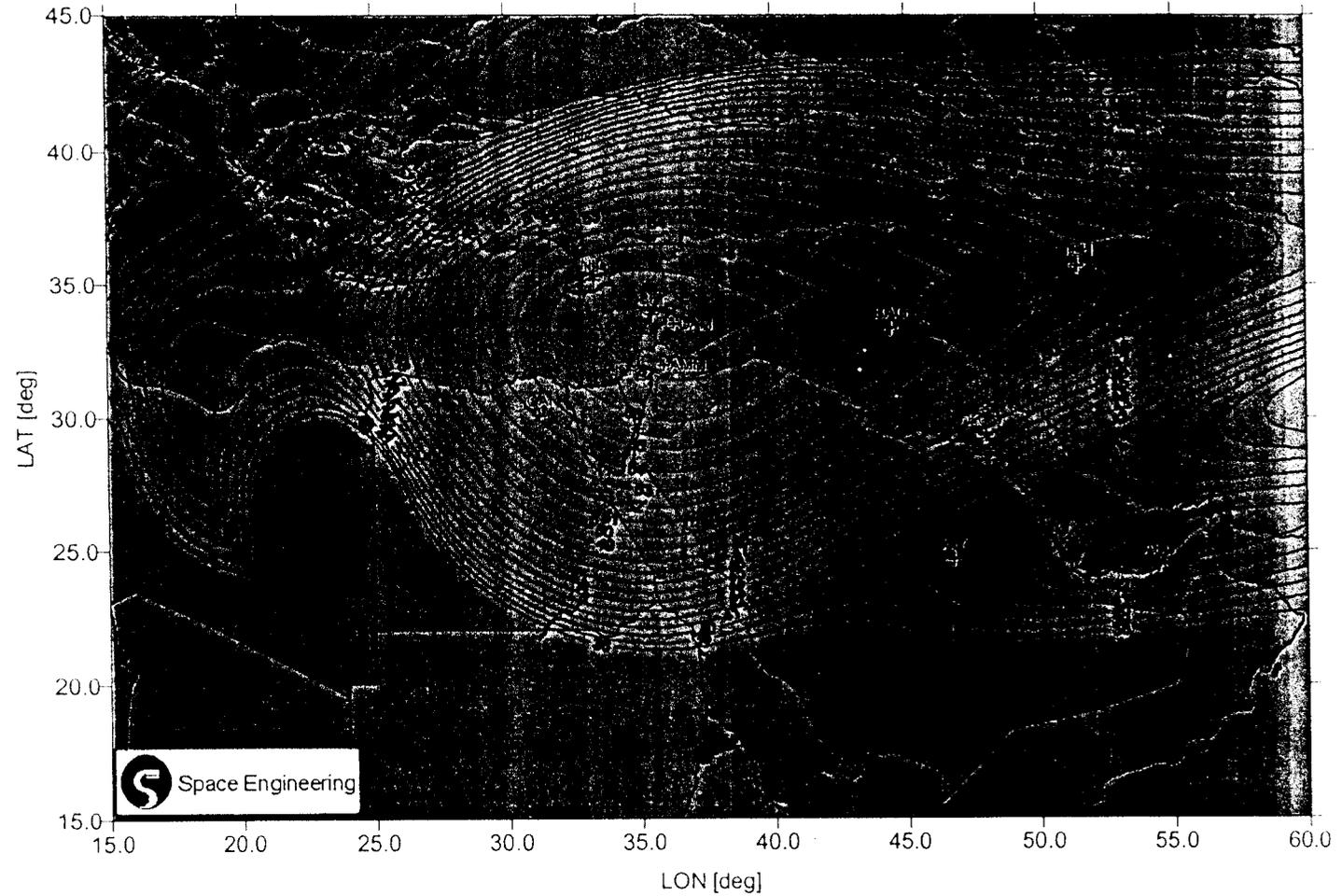
- In the following figures the contour plots concerning antenna Gain performances, converted to EIRP and G/T by means of the above specified payload I/F parameters, are reported.
- The plots are reported in an Earth reference system (latitude/longitude), where the meridians and parallels are straight lines, parallel to the coordinate axes.
- Values of EIRP or G/T reported on these plots are net figures, processed as to give, on each geographical point, the minimum of the performance, considering the  $0.17^\circ$  BPE.





# DGA EIRP contour plots: ME H beam

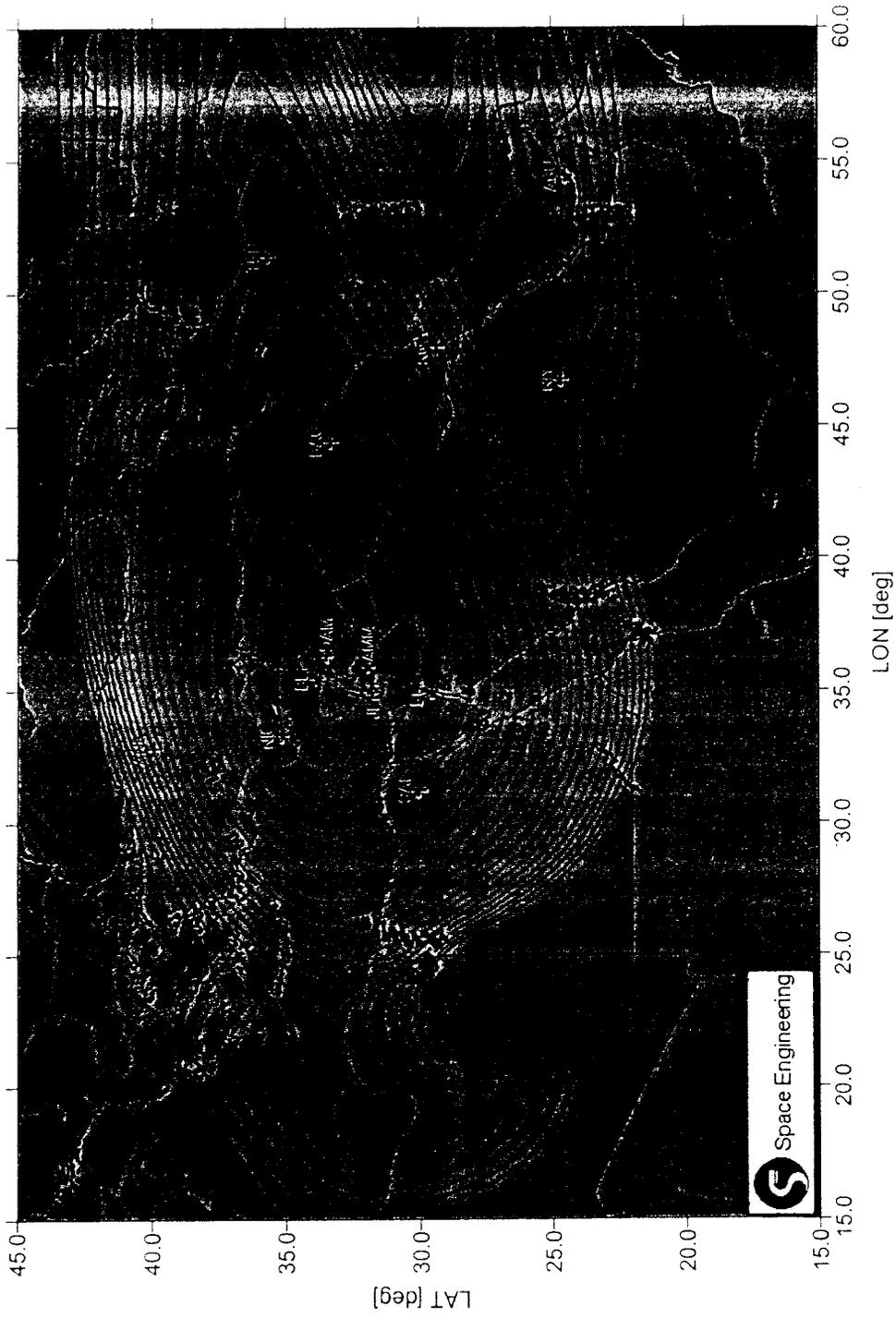
Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Middle-East Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Down-link (CH 14 - 10.99 GHz)





# DGA EIRP contour plots: ME H beam, cont'd

Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Middle-East Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Down-link (CH 15 - 11.07 GHz)



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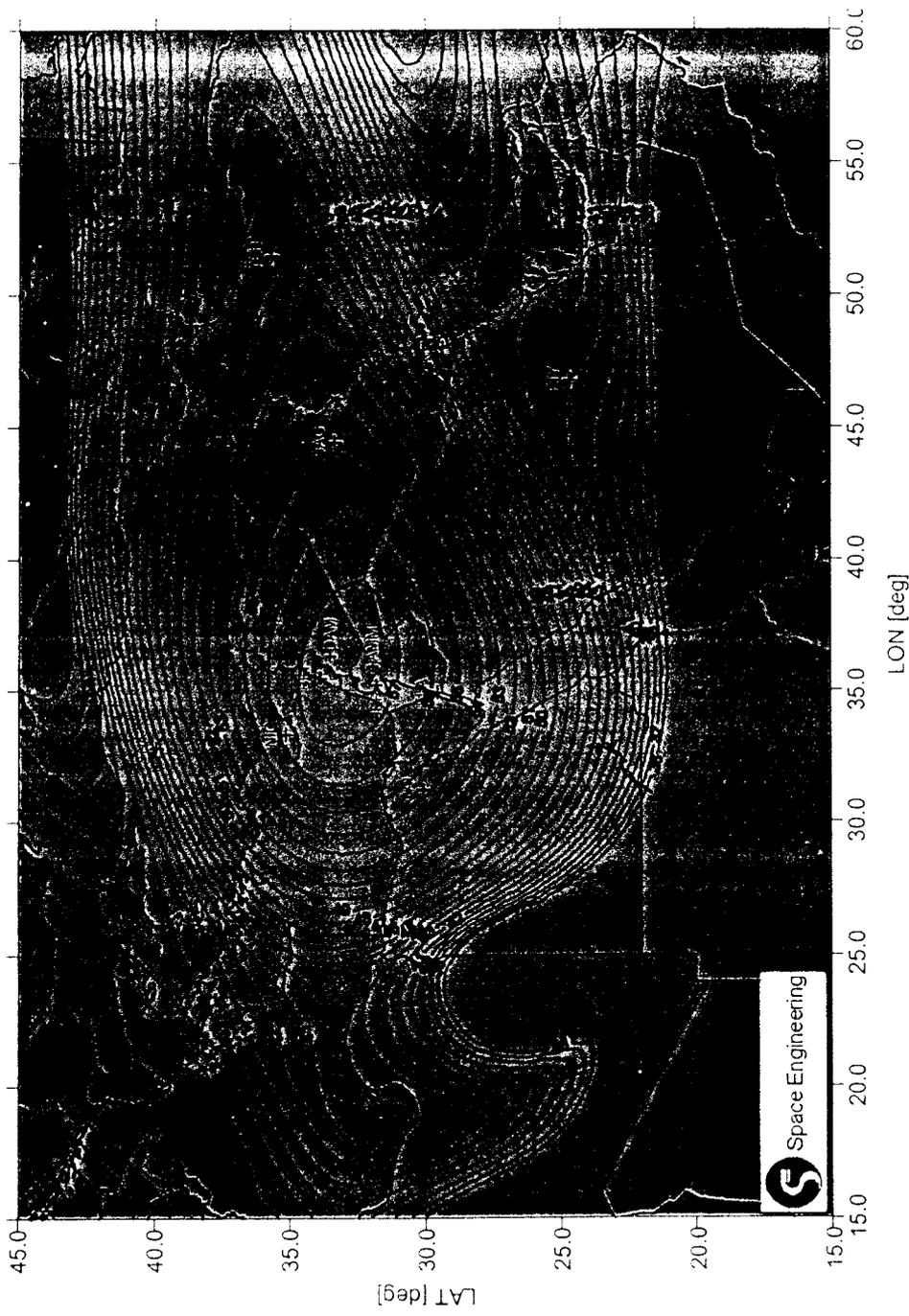
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA EIRP contour plots: ME H beam, cont'd

Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Middle-East Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Down-link (CH 20 - 11.58 GHz)



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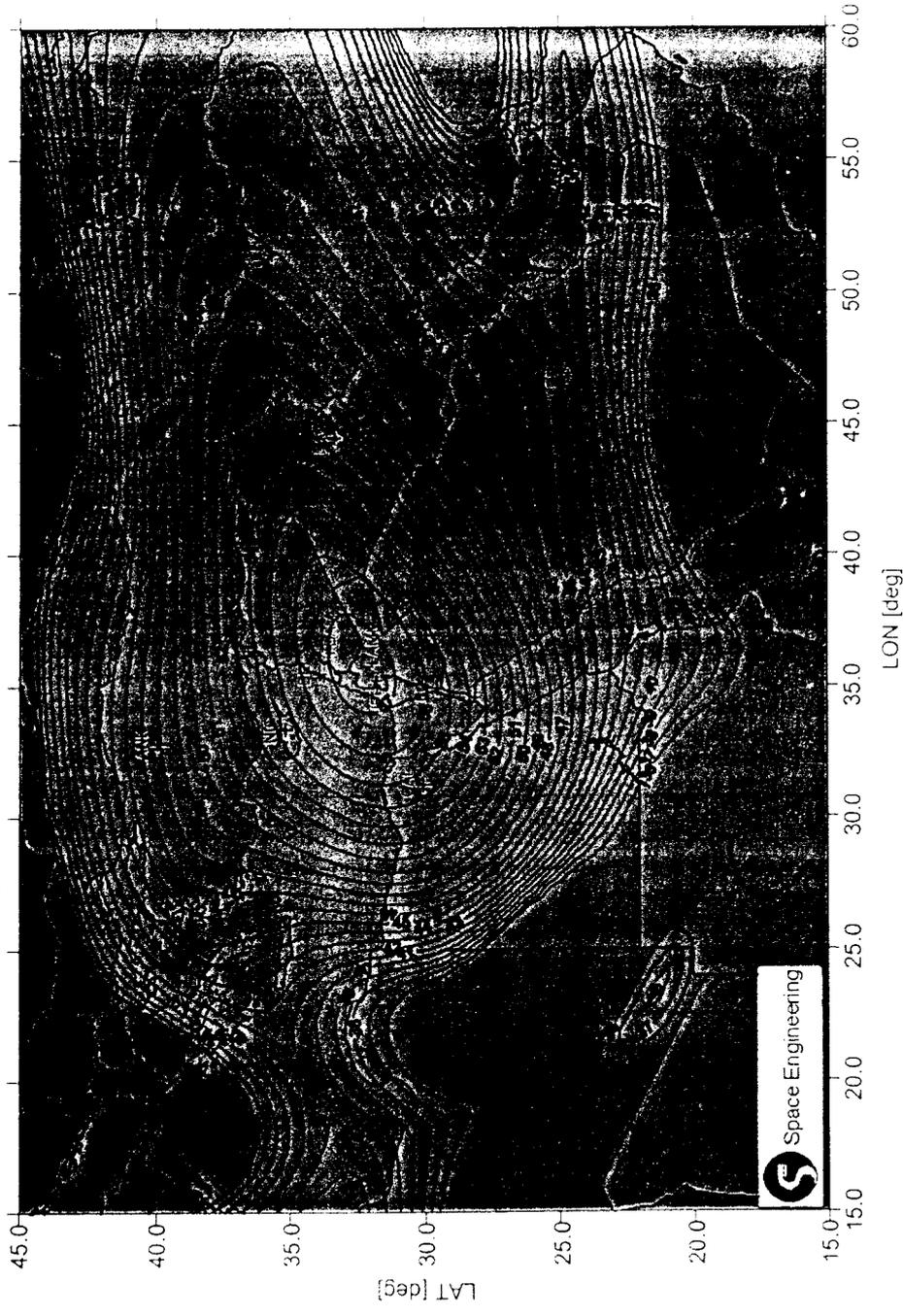
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA EIRP contour plots: ME V beam

Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Middle-East Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Down-link (CH 14' - 10.99 GHz)



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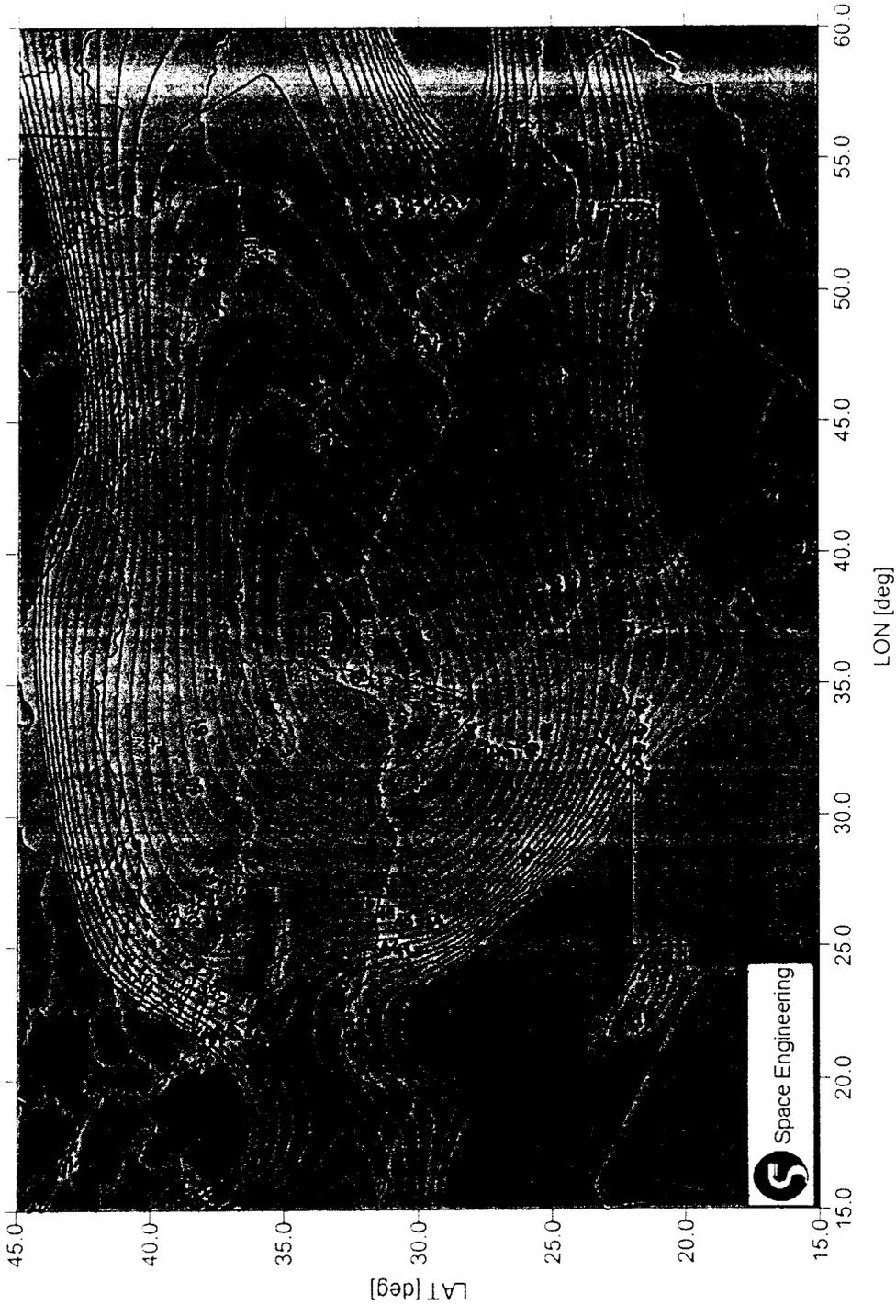
Doc: HO/AMO/0321/ALS Issue: A

Amos-2 - BPE-Net EIRP [dBW] Contour Plot



# DGA EIRP contour plots: ME V beam, cont'd

Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Middle-East Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Down-link (CH 16 - 11.24 GHz)



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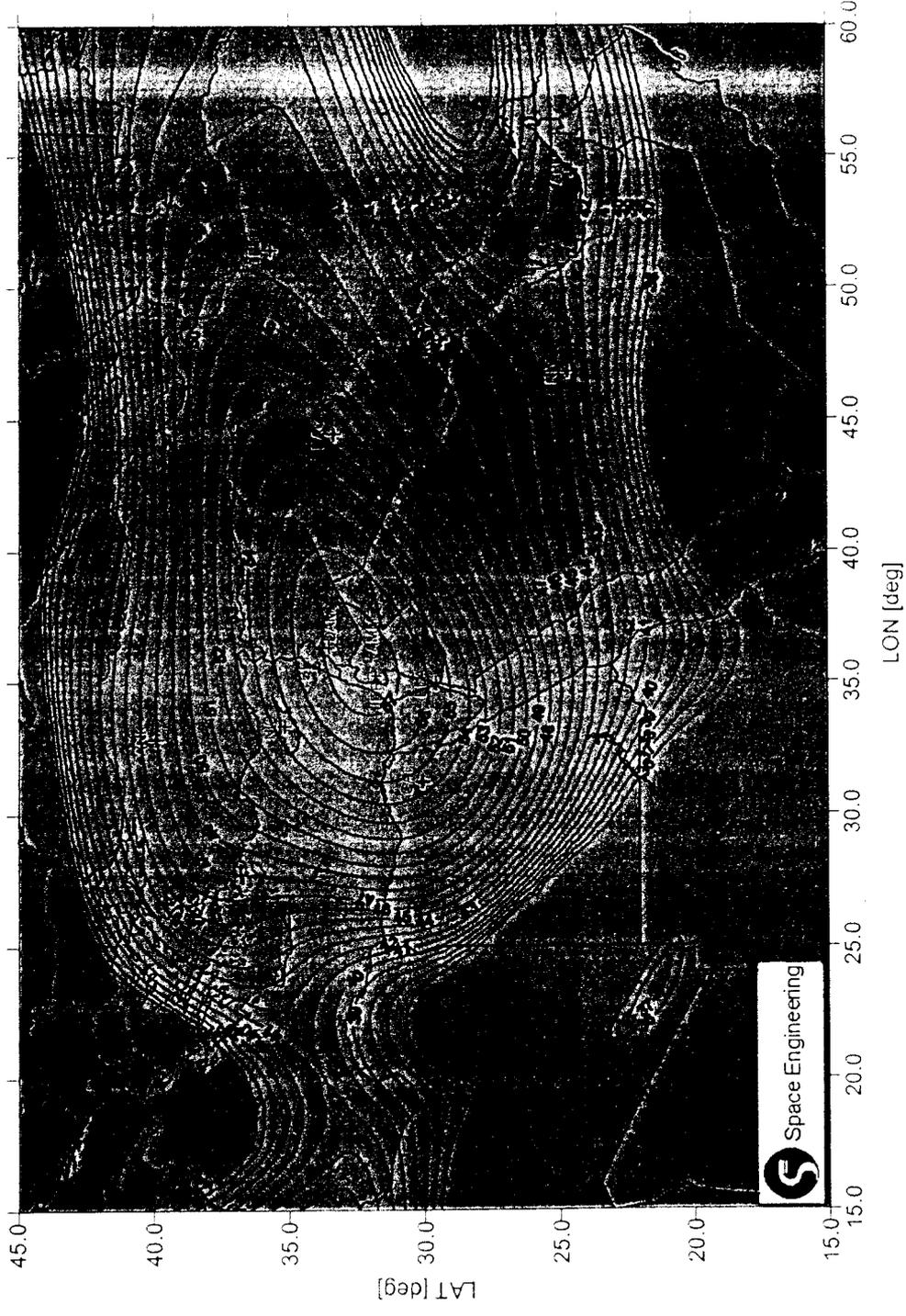
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA EIRP contour plots: ME V beam, cont'd

Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Middle-East Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Down-link (CH 17 - 11.32 GHz)



SPAZIO

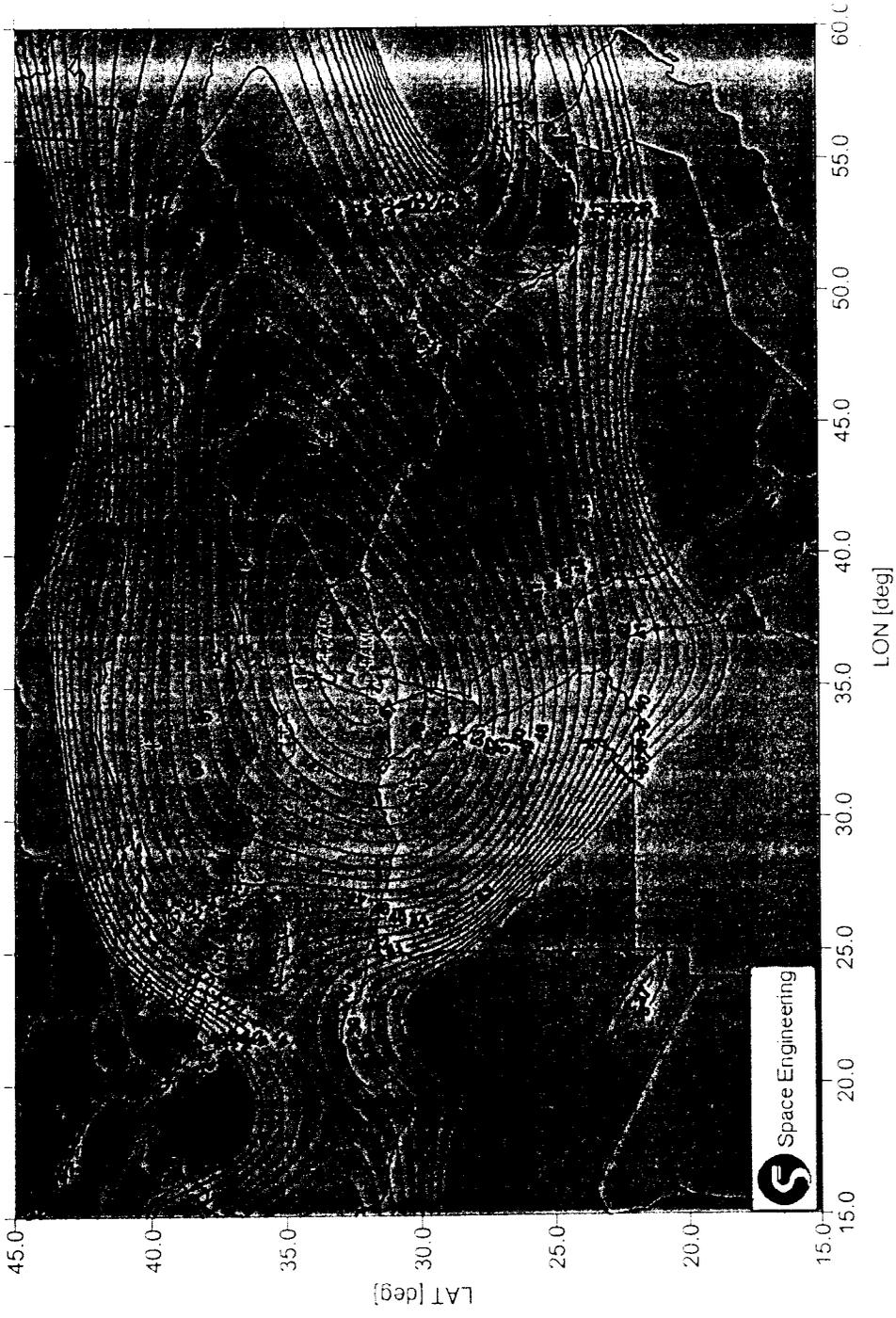
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA EIRP contour plots: ME V beam, cont'd

Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Middle-East Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Down-link (CH 21' - 11.66 GHz)



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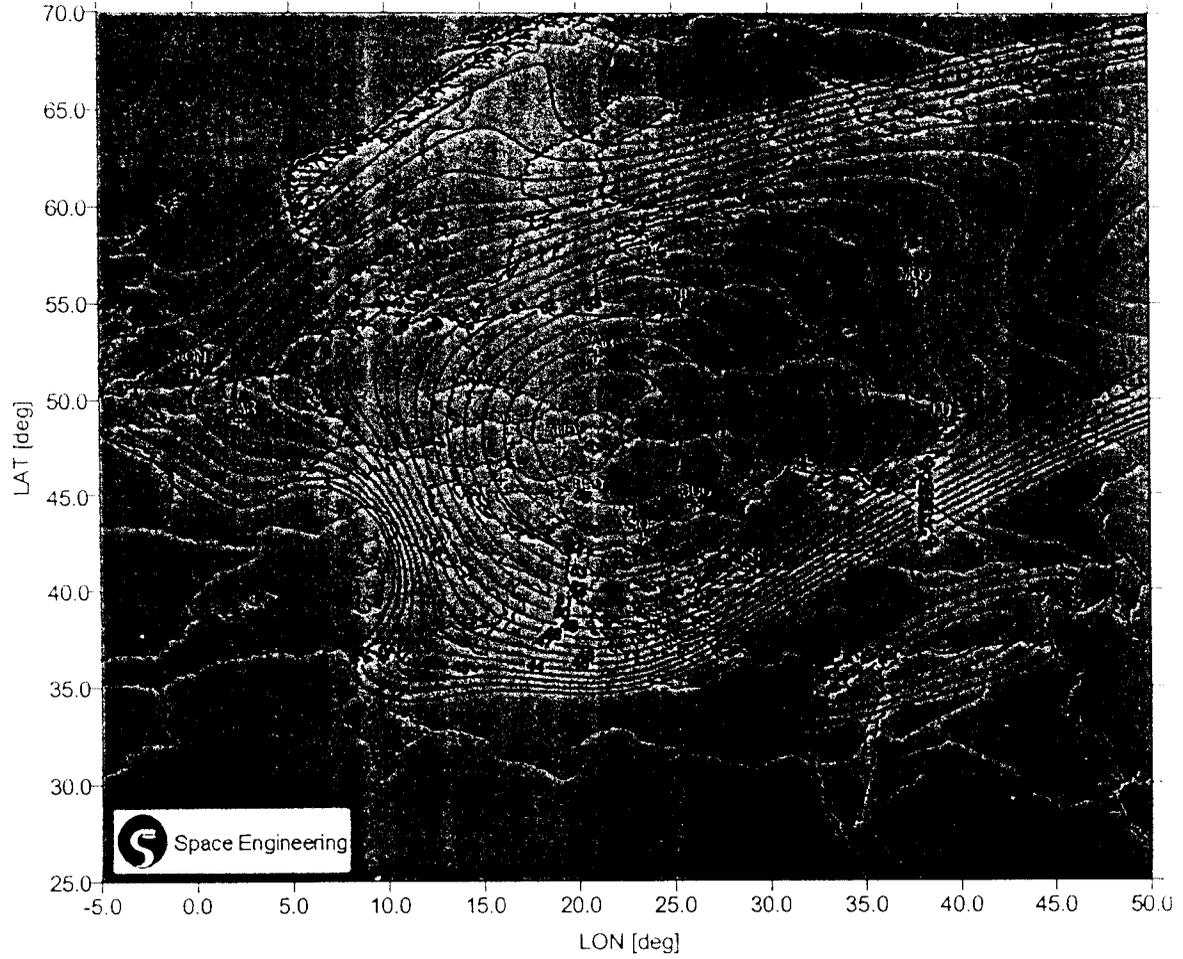
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A Further state of availability



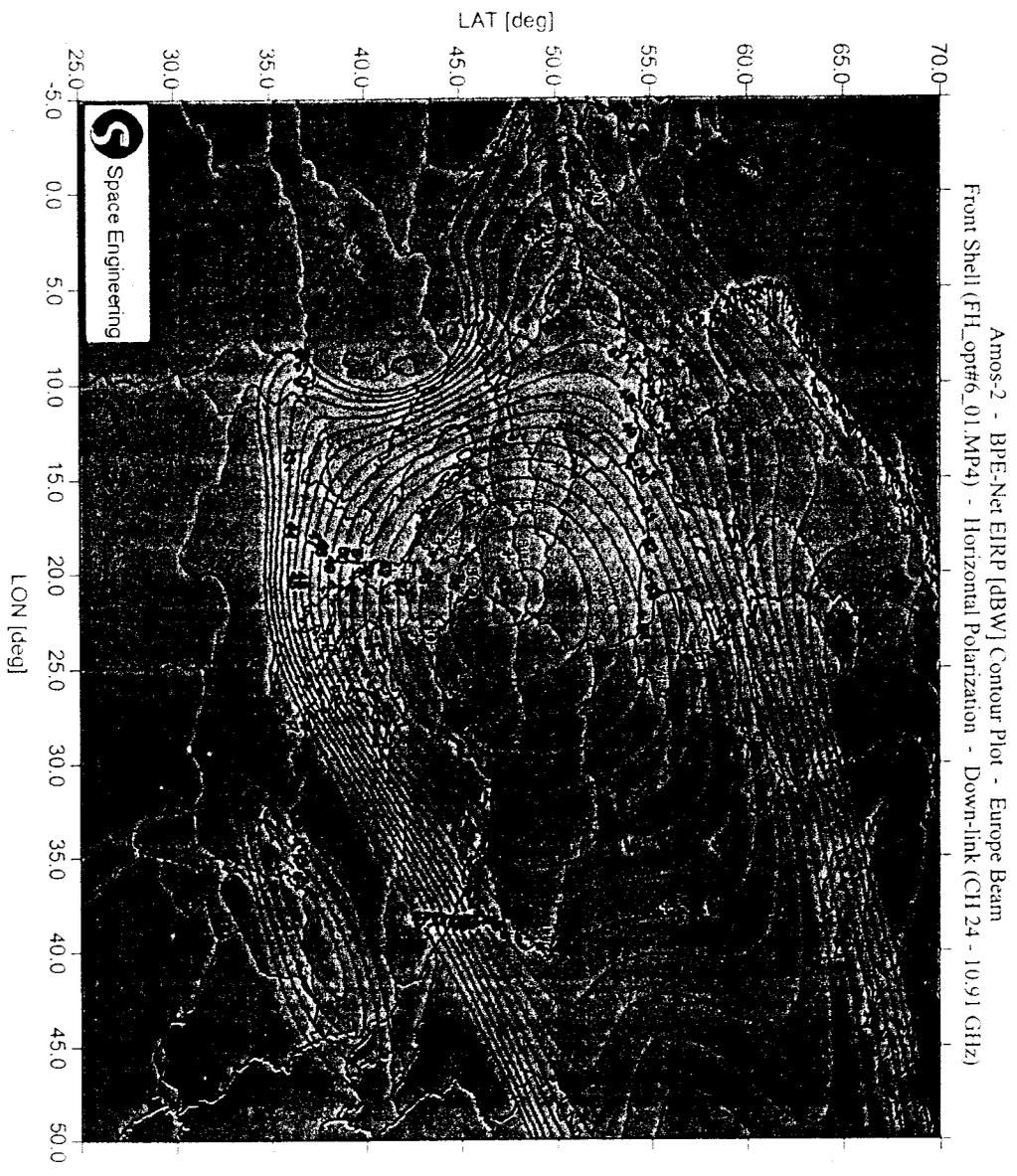
# DGA EIRP contour plots: EU H beam

Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Europe Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Down-link (CH 23 - 10.82 GHz)





# DGA EIRP contour plots: EU H beam, cont'd



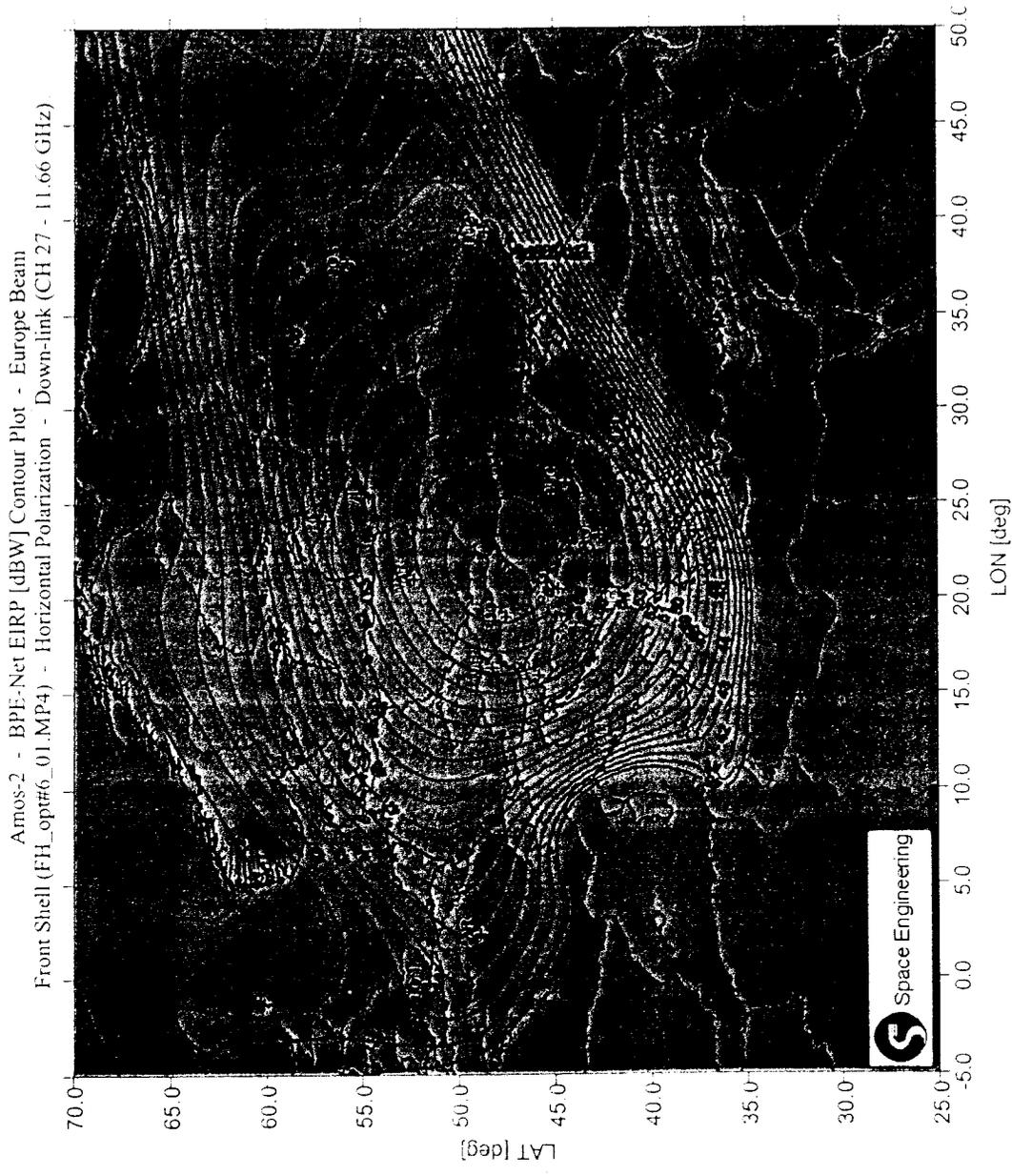
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A Phosphor Screen (0.1mm) 0017



# DGA EIRP contour plots: EU H beam, cont'd



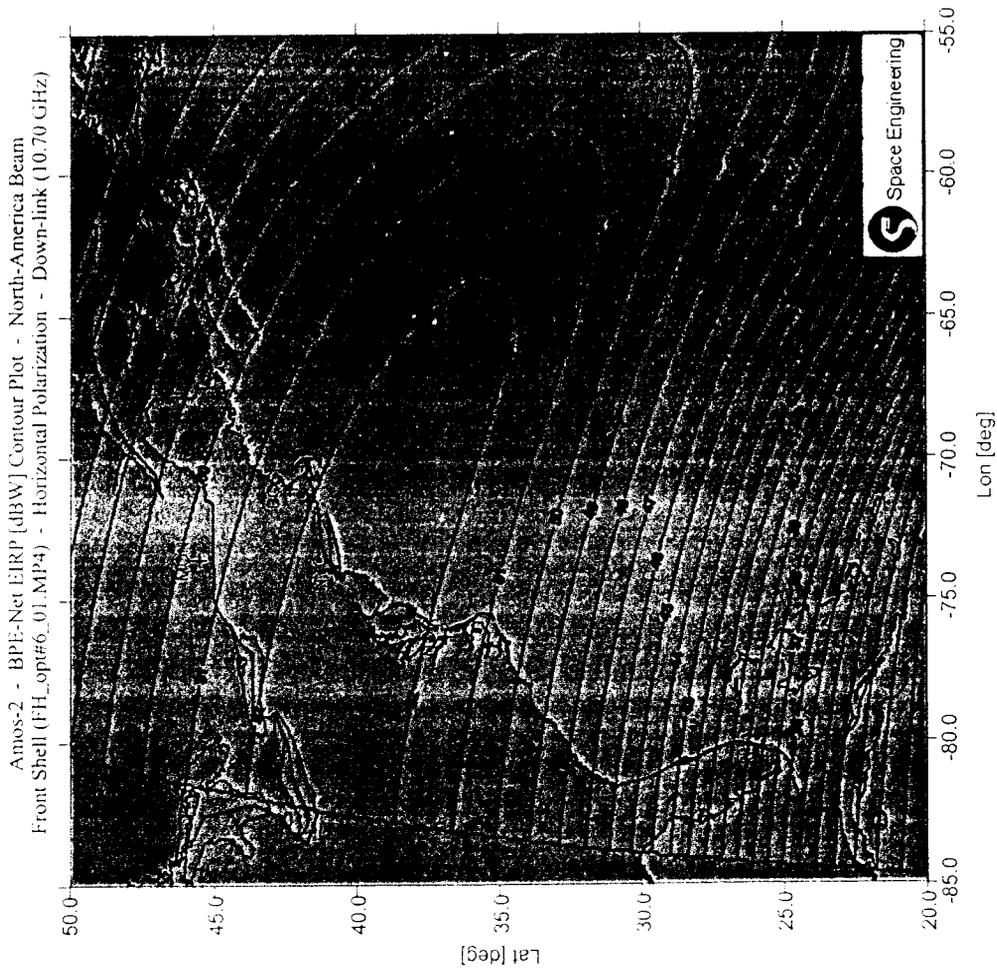
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Amos-2 - BPE-Net EIRP [dBW] Contour Plot - Europe Beam



# DGA EIRP contour plots: NA H beam



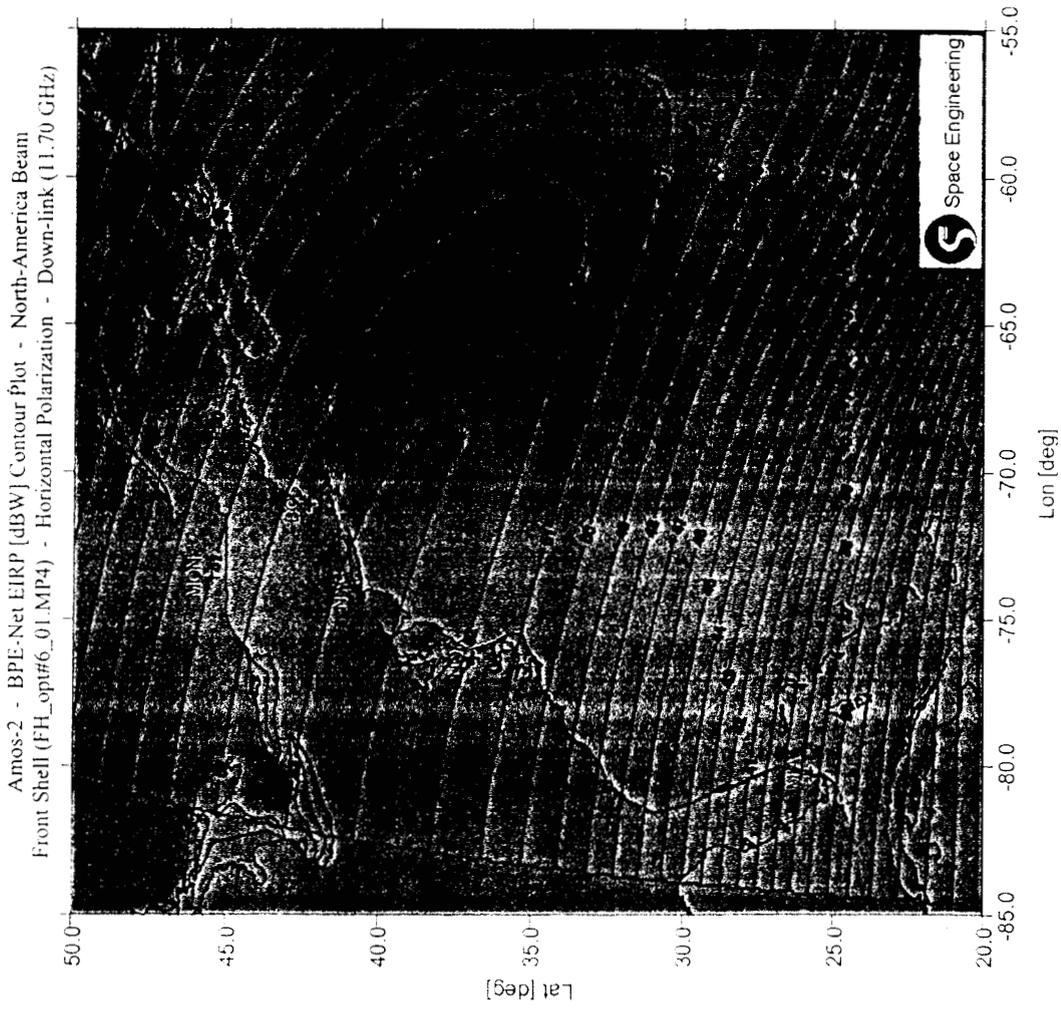
SPAZIO

Doc.: HO/AMO/0321/ALS Issue: A

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# DGA EIRP contour plots: NA H beam, cont'd



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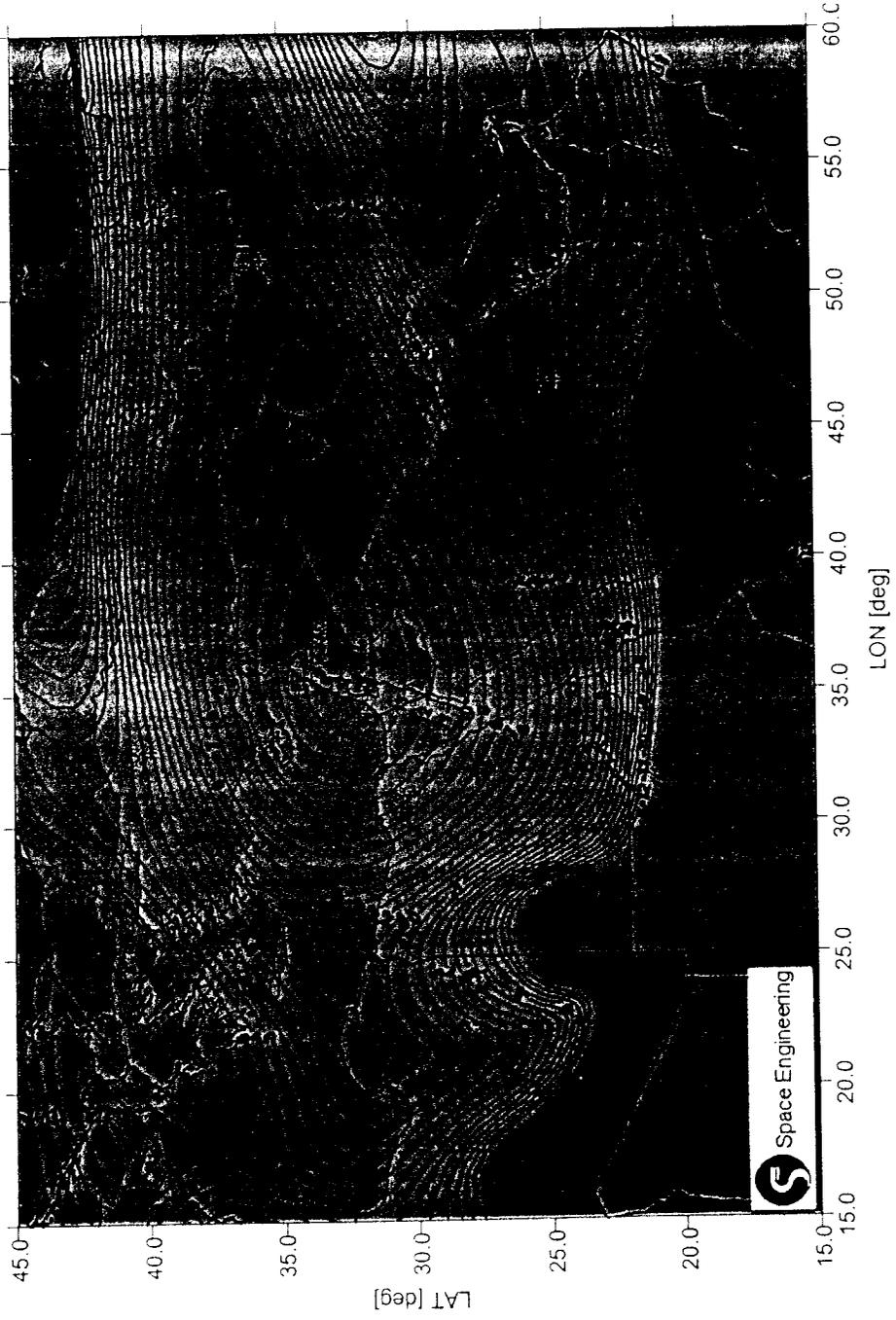
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA G/T contour plots: ME H beam

Amos-2 - BPE-Net G/T [dBK] Contour Plot - Middle-East Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Up-link (CH 12 - 13.12 GHz)



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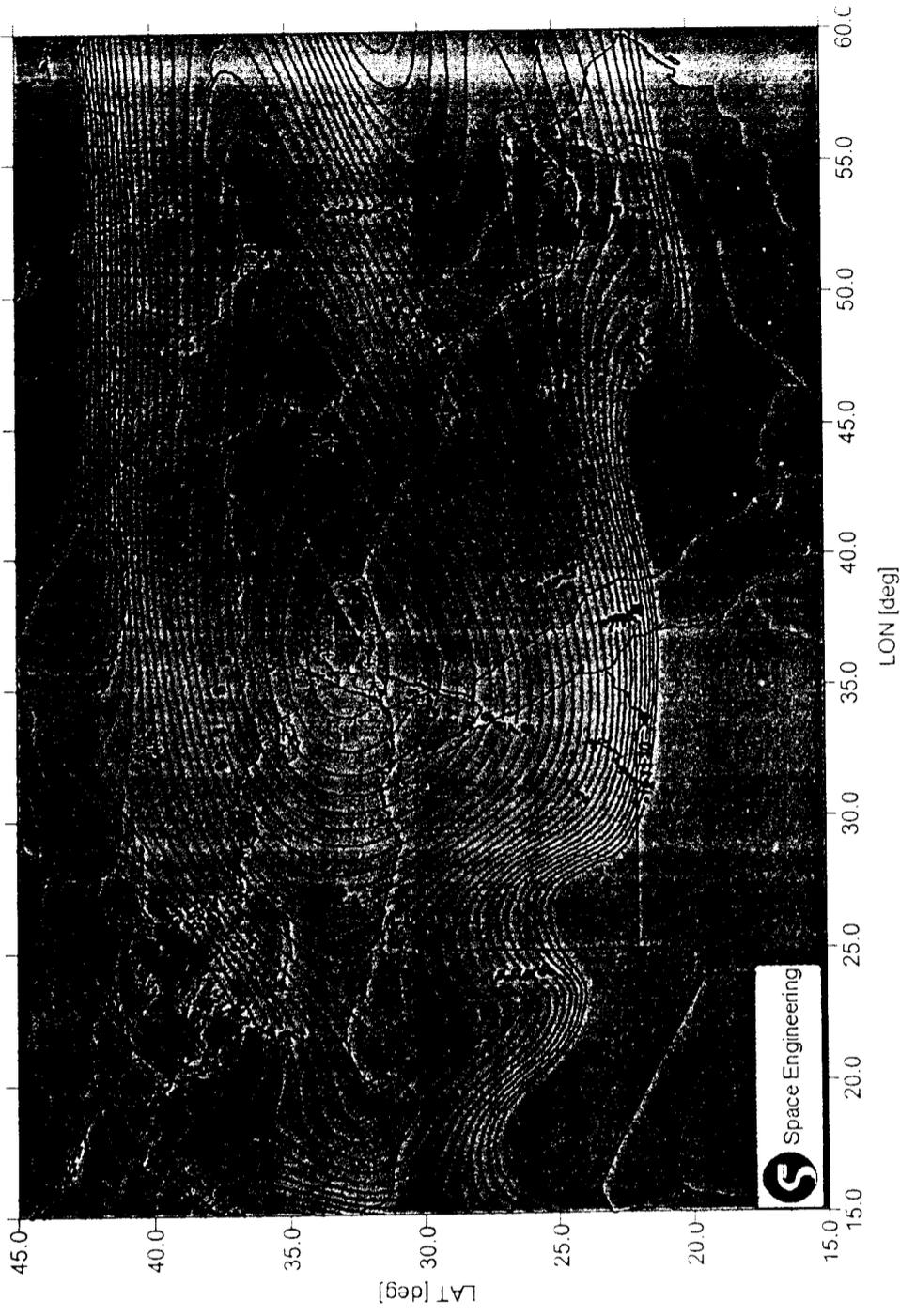
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA G/T contour plots: ME H beam, cont'd

Amos-2 - BPE-Net G/T [dBK] Contour Plot - Middle-East Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Up-link (CH 16 - 13.79 GHz)



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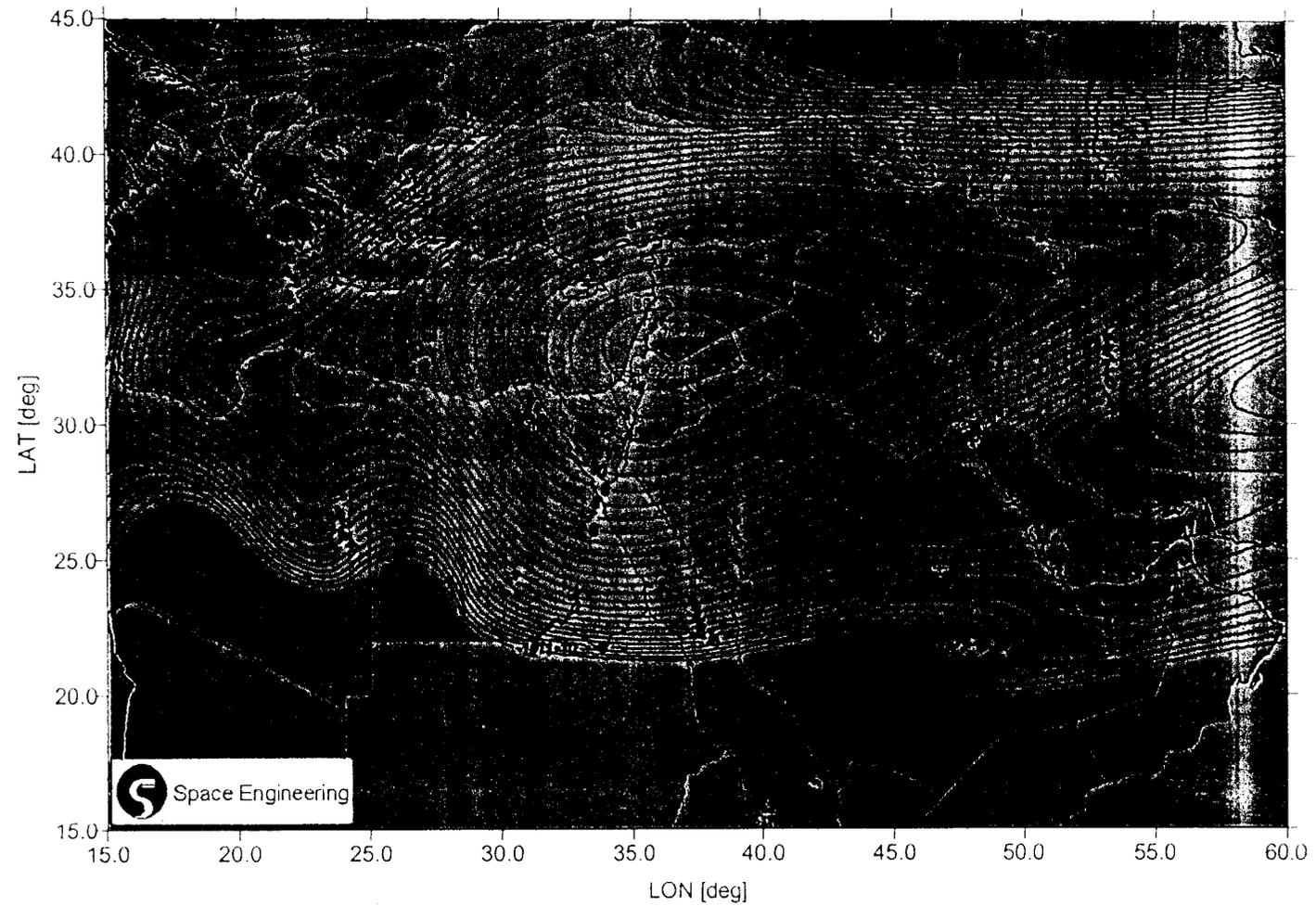
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# DGA G/T contour plots: ME H beam, cont'd



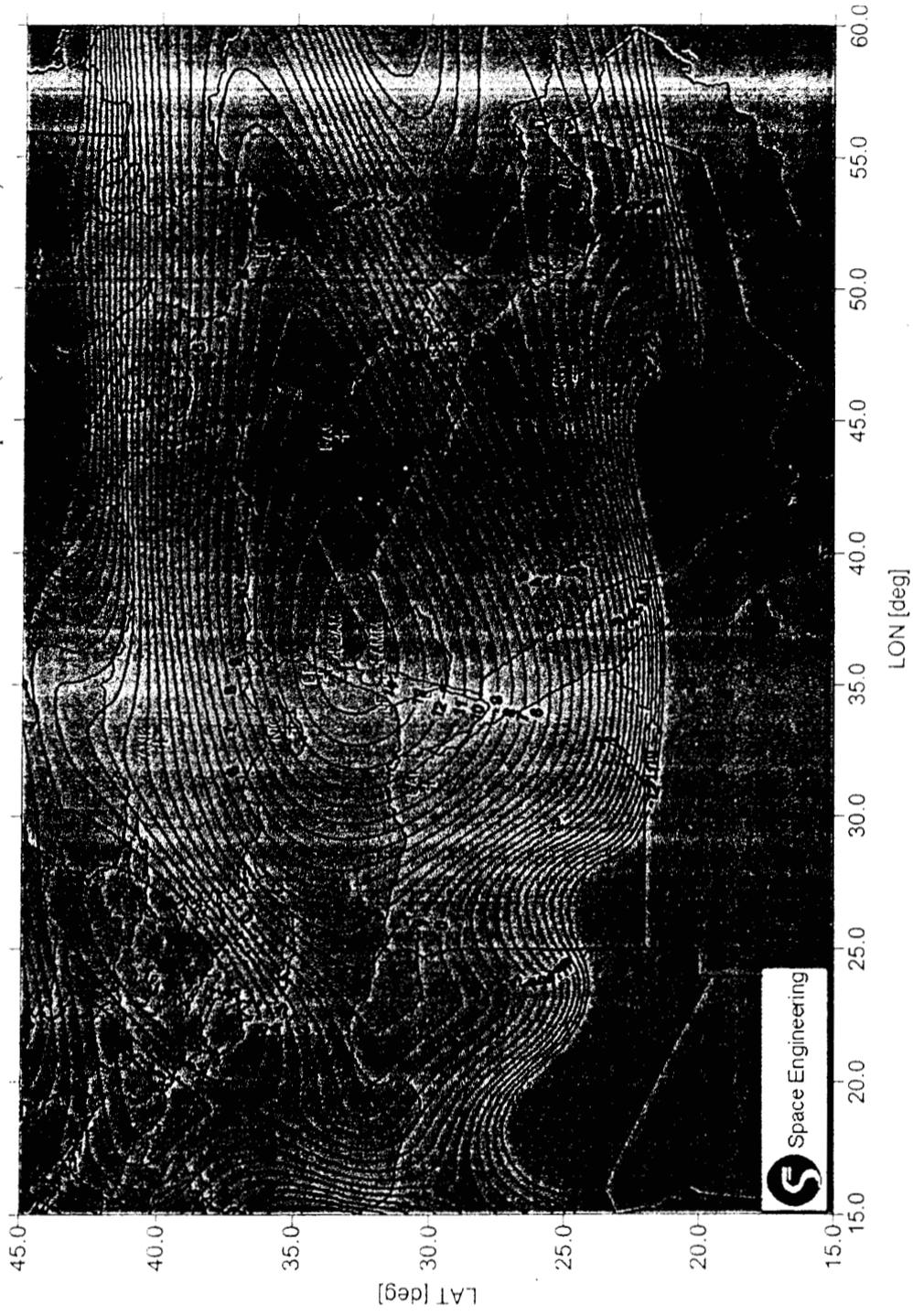
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Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Up-link (CH 17 - 13.87 GHz)





# DGA G/T contour plots: ME H beam, cont'd

Amos-2 - BPE-Net G/T [dBK] Contour Plot - Middle-East Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Up-link (CH 15 - 14.12 GHz)



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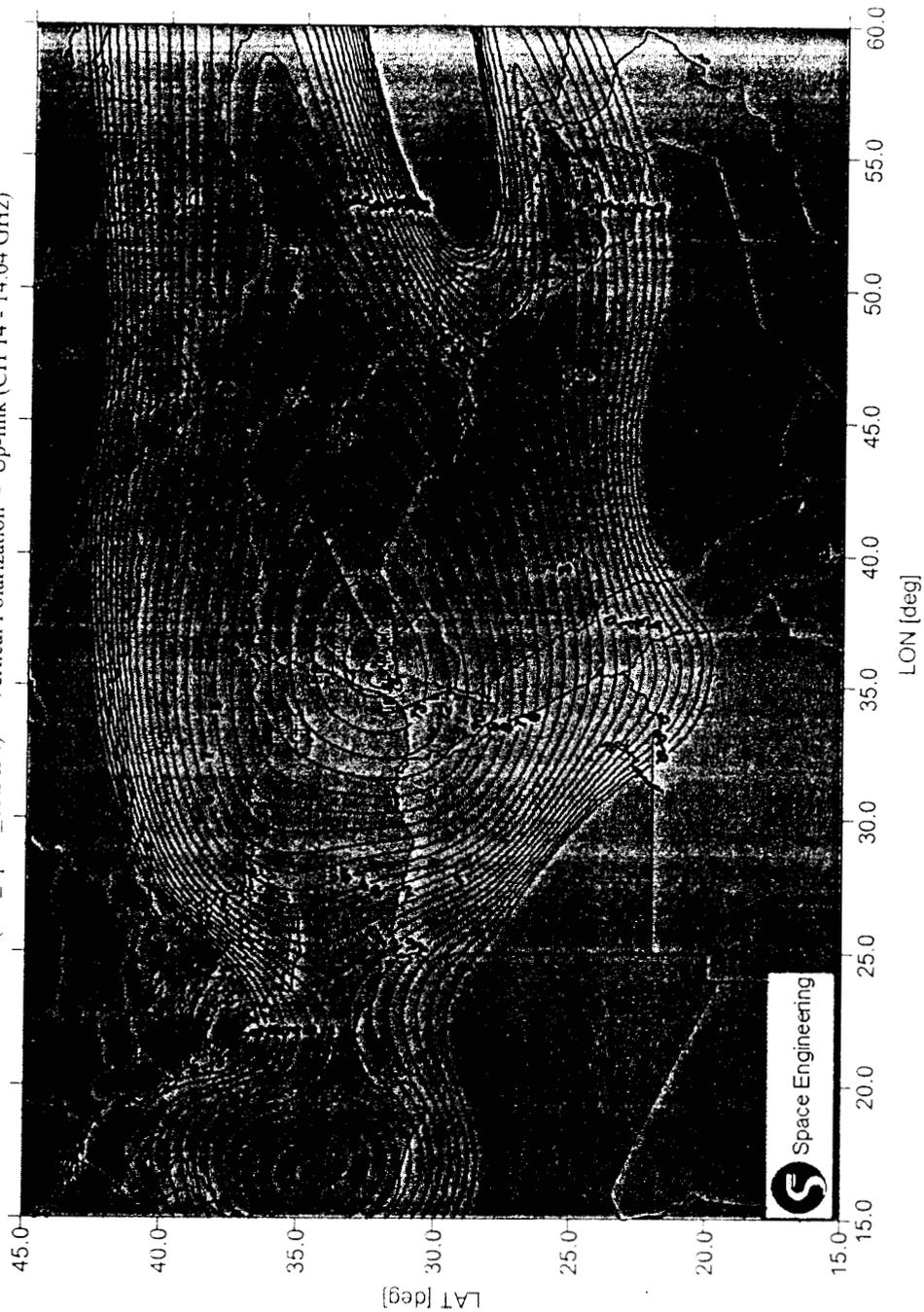
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA G/T contour plots: ME V beam

Amos-2 - BPE-Net G/T [dBK] Contour Plot - Middle-East Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Up-link (CH 14 - 14.04 GHz)



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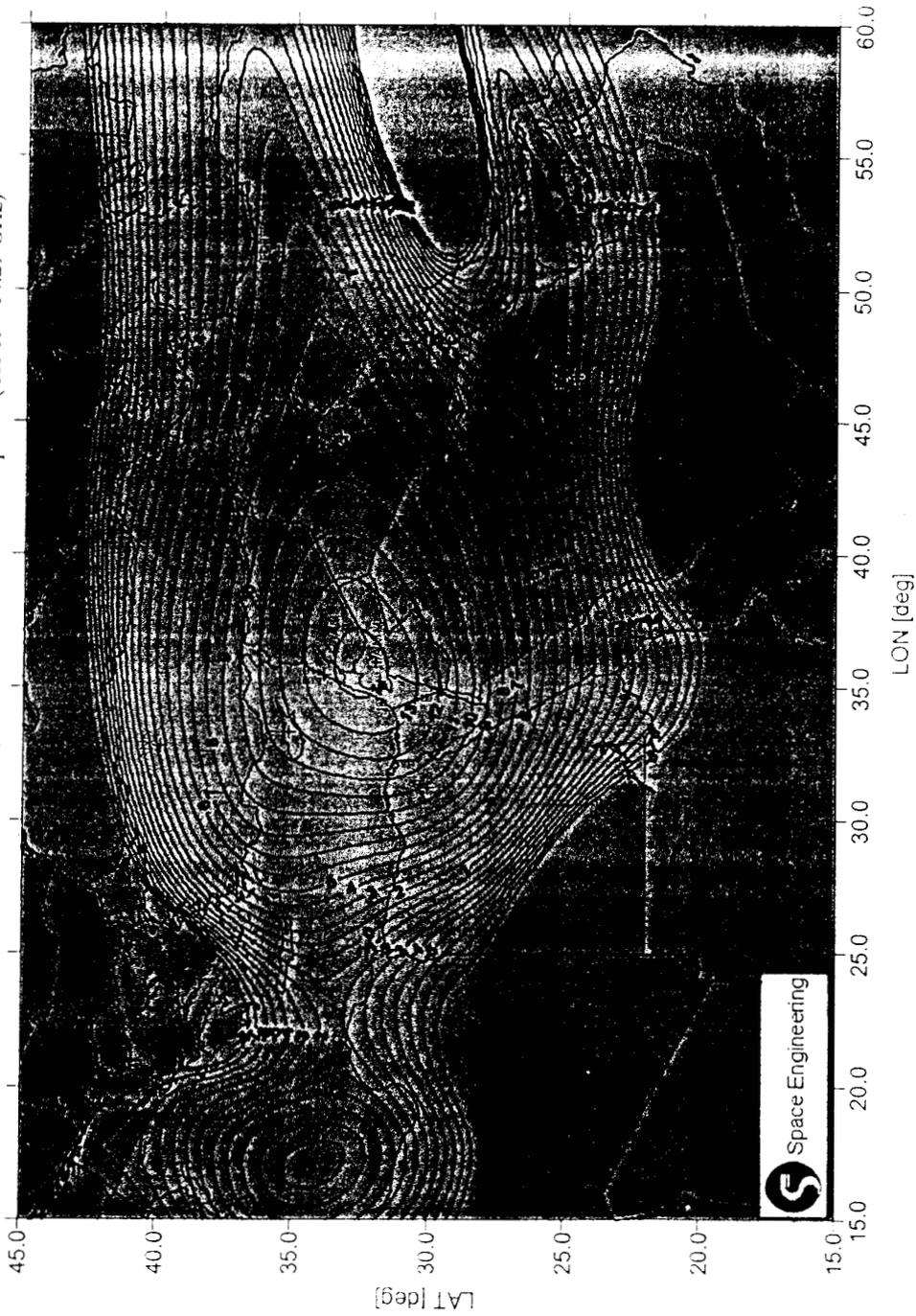
Doc.: HO/AMO/0321/ALS Issue: A

Amos-2 - BPE-Net G/T [dBK] Contour Plot - Middle-East Beam



# DGA G/T contour plots: ME V beam, cont'd

Amos-2 - BPE-Net G/T [dBK] Contour Plot - Middle-East Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Up-link (CH 19 - 14.29 GHz)



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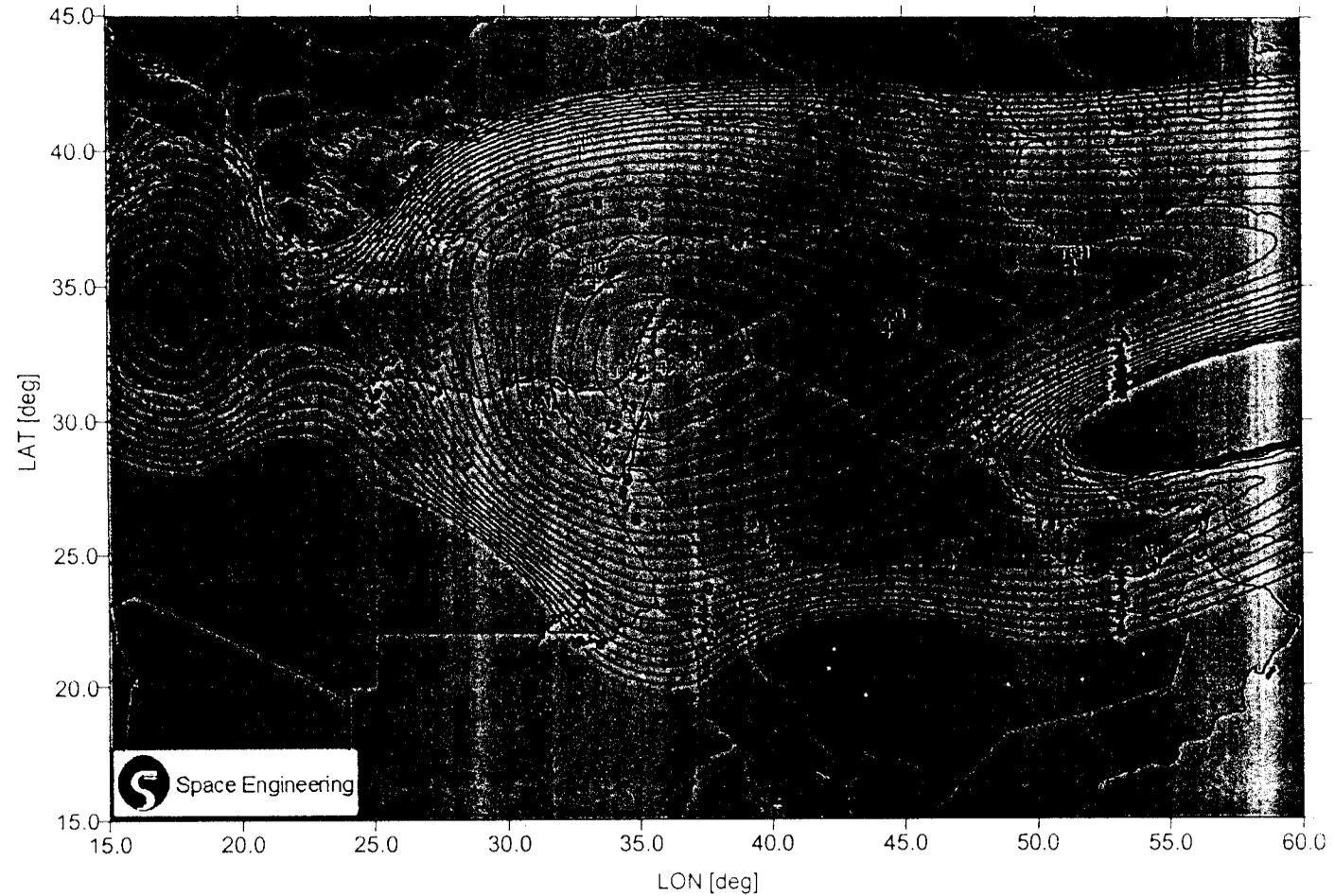
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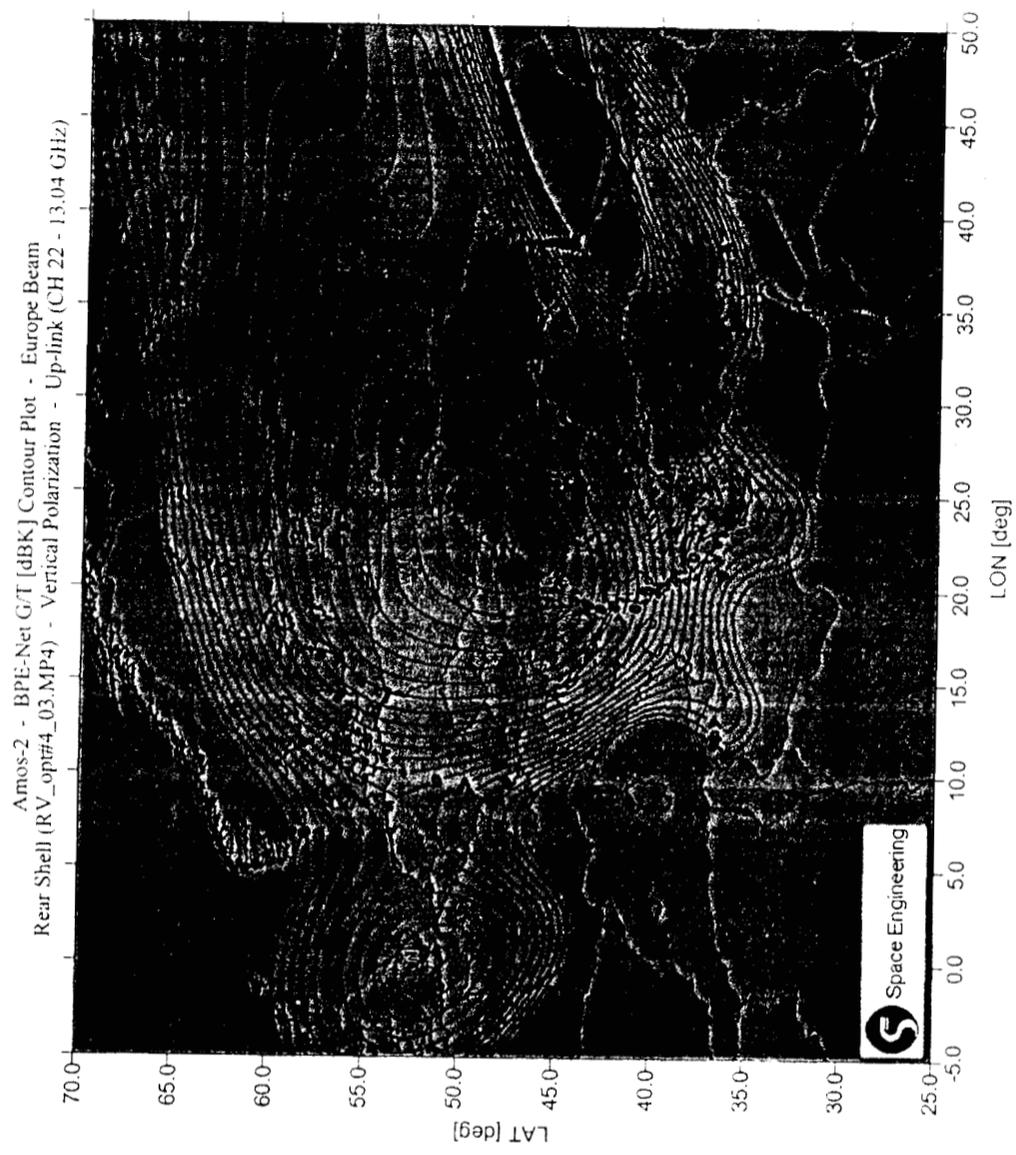
# DGA G/T contour plots: ME V beam, cont'd



Amos-2 - BPE-Net G/T [dBK] Contour Plot - Middle-East Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Up-link (CH 21 - 14.46 GHz)



# DGA G/T contour plots: EU V beam



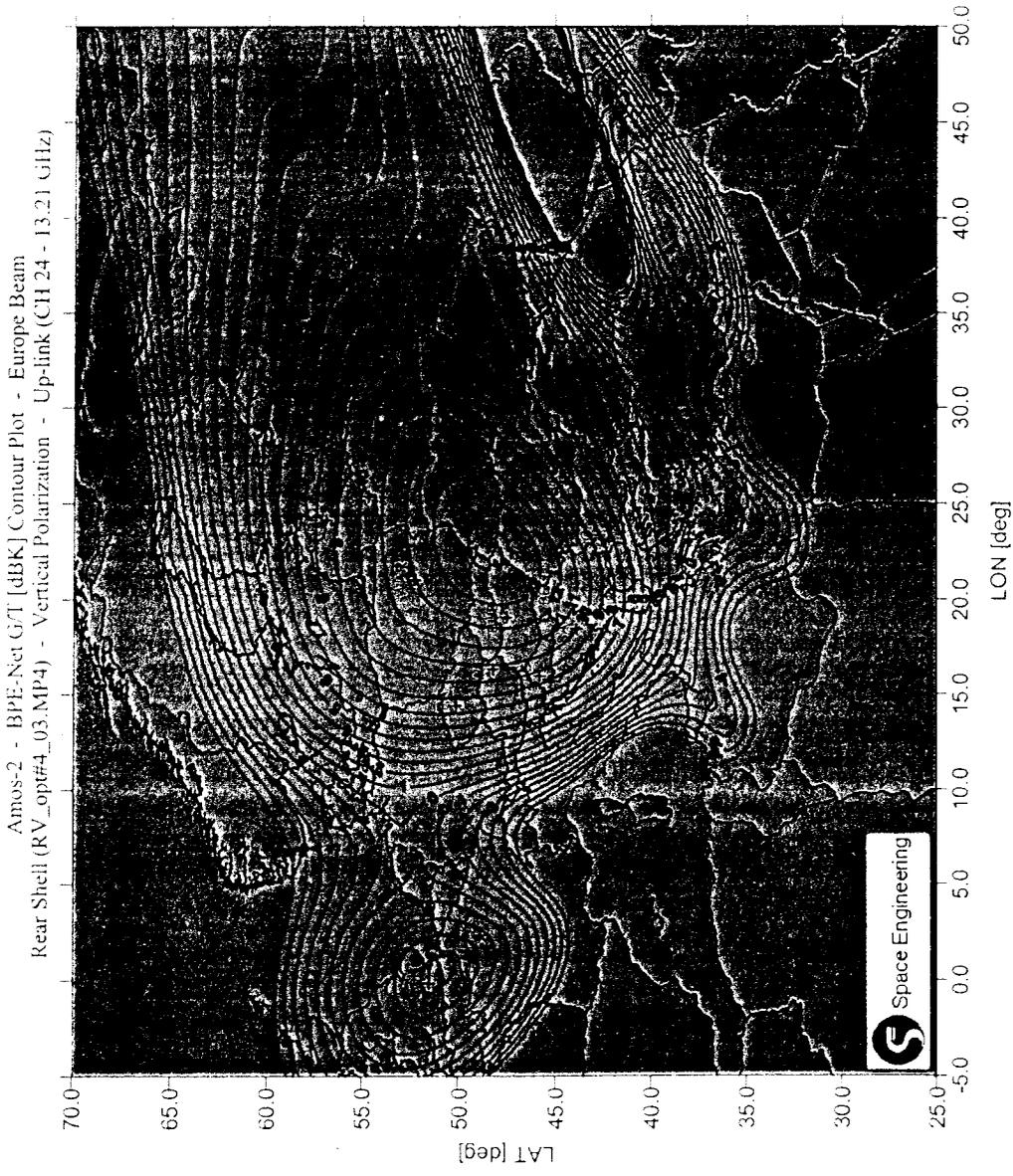
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# DGA G/T contour plots: EU V beam, cont'd



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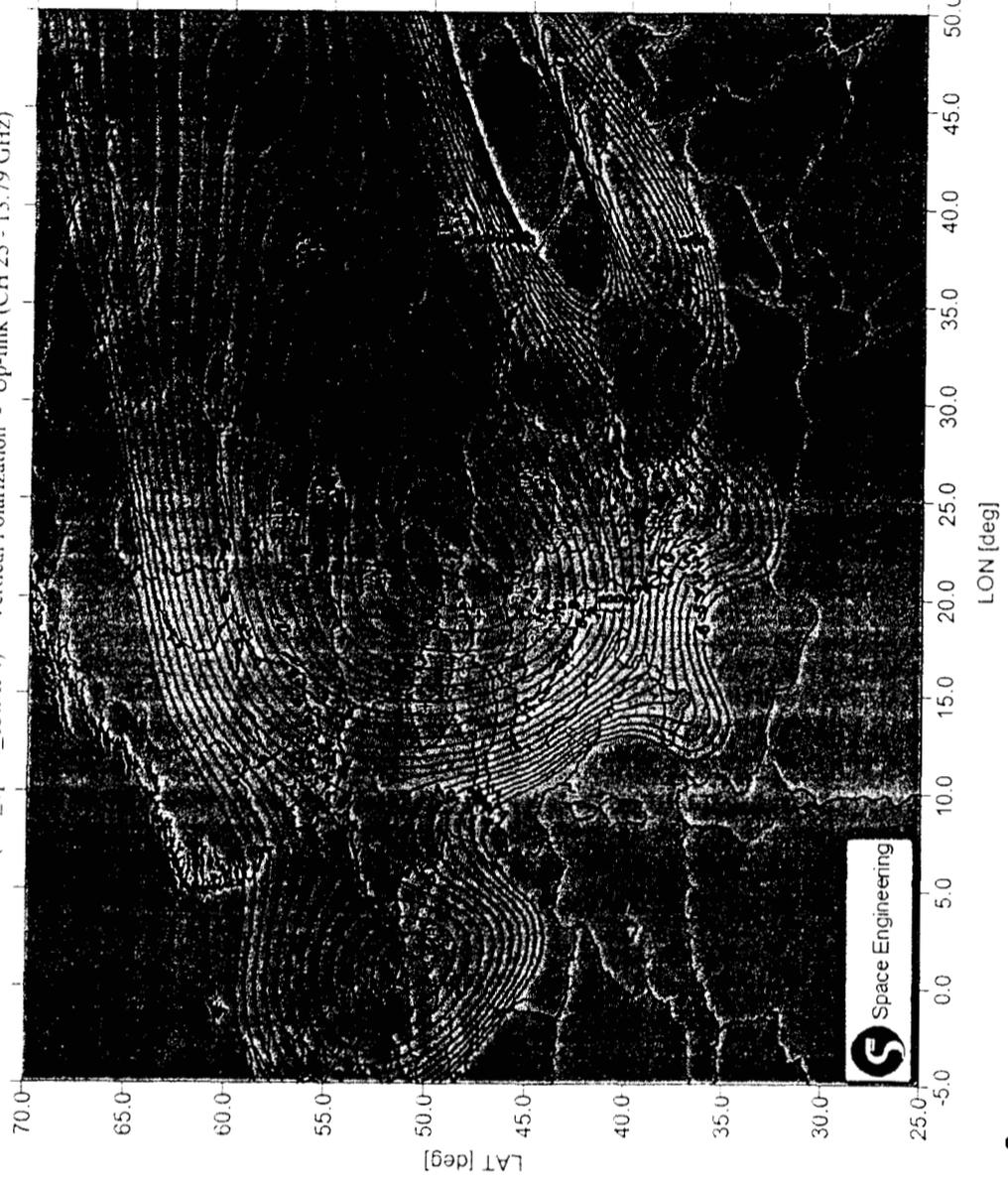
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# DGA G/T contour plots: EU V beam, cont'd

Amos-2 - BPE-Net G/T [dBK] Contour Plot - Europe Beam  
Rear Shell (RV\_opt#4\_03.MP4) - Vertical Polarization - Up-link (CH 25 - 13.79 GHz)



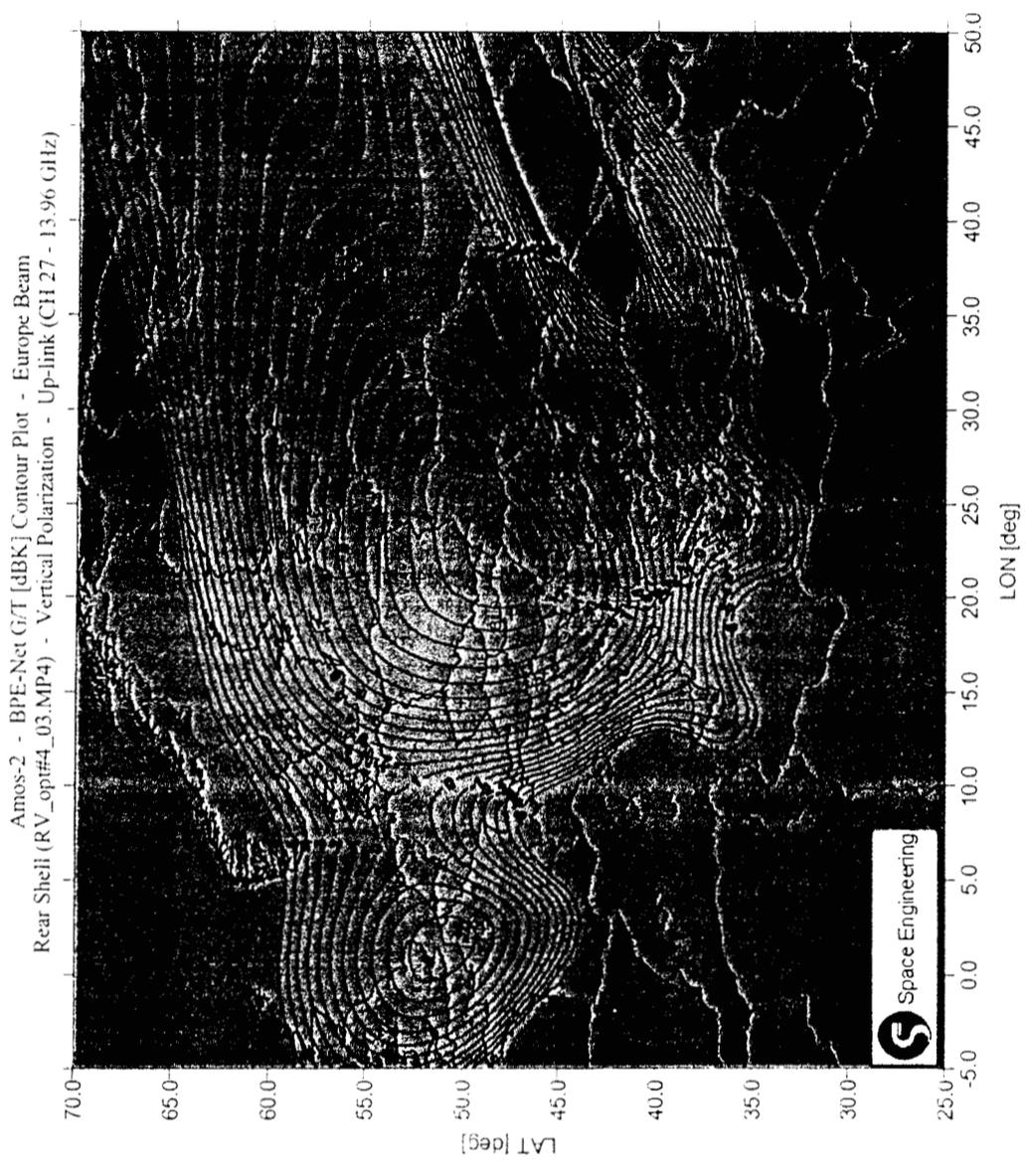
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Doc.: HO/AMO/0321/ALS Issue: A

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# DGA G/T contour plots: EU V beam, cont'd



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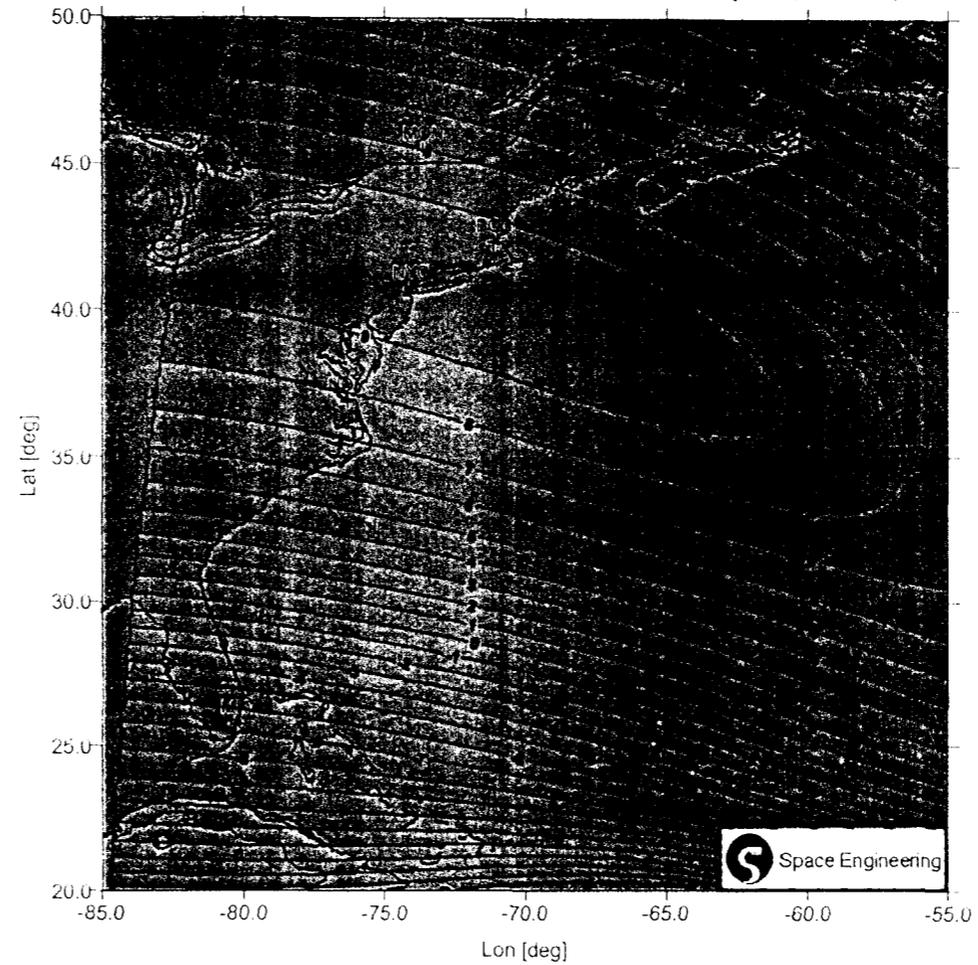
Doc: HO/AMIO/0321/ALS Issue: A

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# DGA G/T contour plots: NA H beam



Amos-2 - BPE-Net G/T [dBK] Contour Plot - North-America Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Up-link (13.75 GHz)



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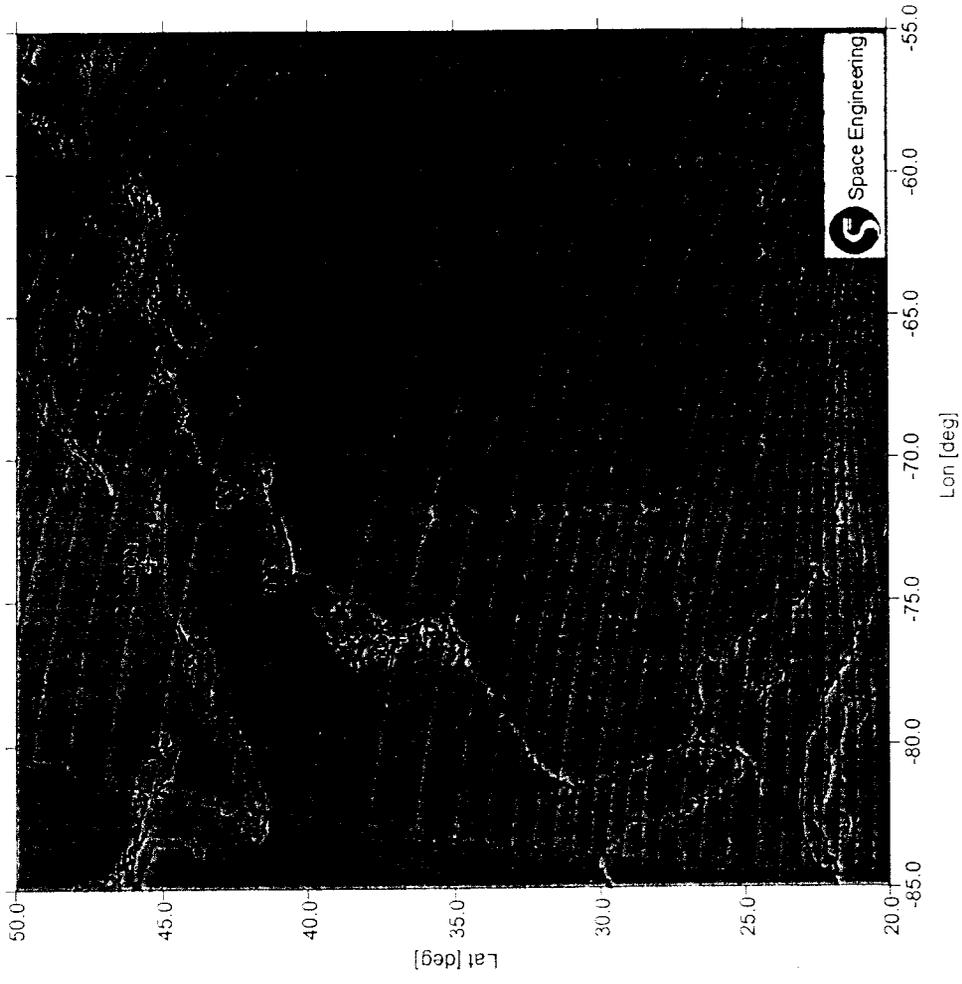
Doc.: HO/AMO/0321/ALS Issue: A

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# DGA G/T contour plots: NA H beam, cont'd

Amos-2 - BPE-Net G/T [dBK] Contour Plot - North-America Beam  
Front Shell (FH\_opt#6\_01.MP4) - Horizontal Polarization - Up-link (14.50 GHz)



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**AMOS-2**  
DGA & Global Horn  
CRITICAL DESIGN REVIEW (CDR)  
Gain Contour Plots  
@ Geographical Coordinates

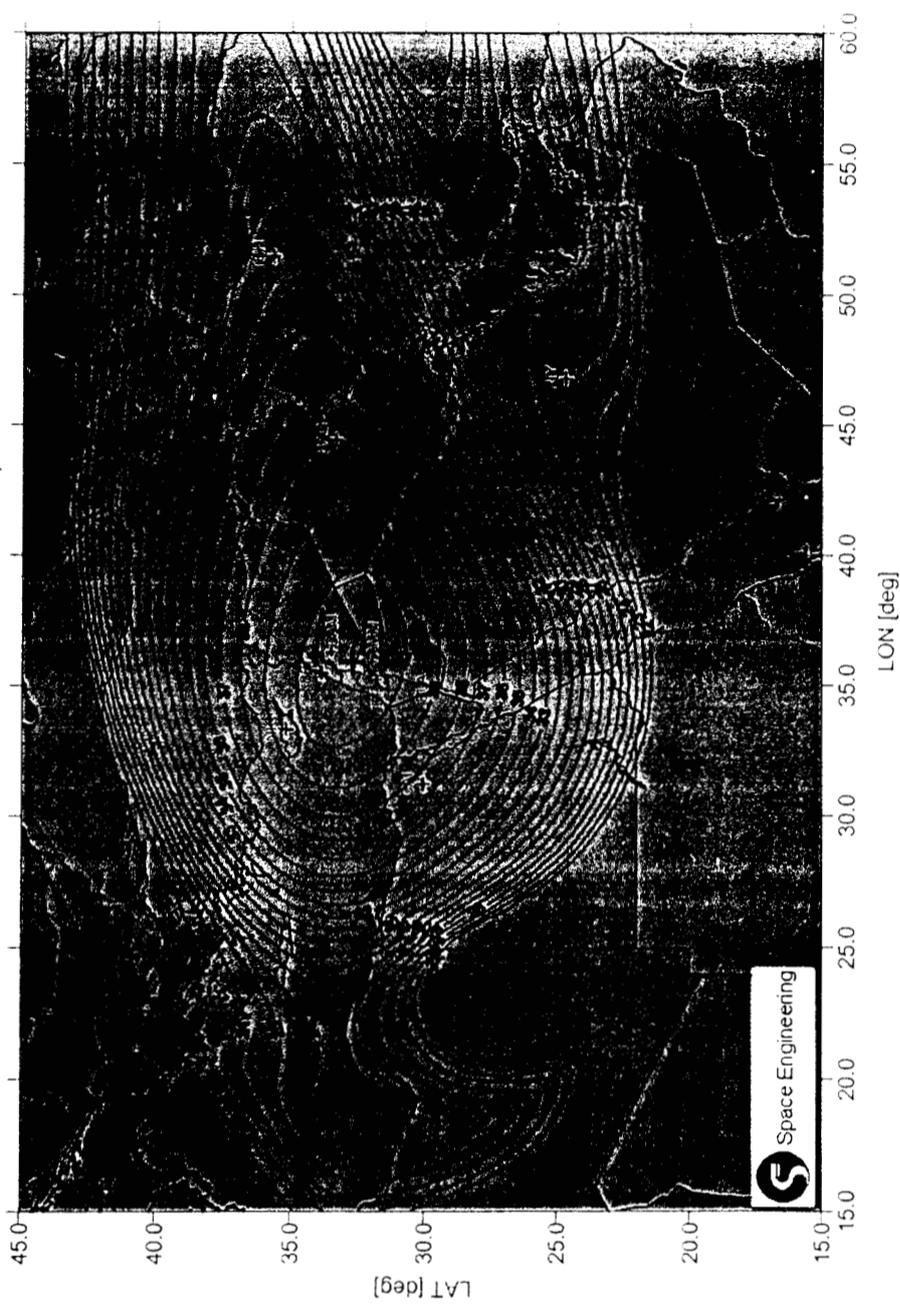




# Gain Contour Plots @ Geographical Coordinates (1/9)

- Middle-Eastern Beam, Horizontal Polarization, Down-Link

Amos-2 - BPE-Net Gain [dBi] Contour Plot - Middle-East Beam - Front Shell (FH\_opt#6\_01.MP4)  
Horizontal Polarization - Down-link (CH 14 - 10.99 GHz) - Peak Value: 40.83 dBi



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Rev. 001

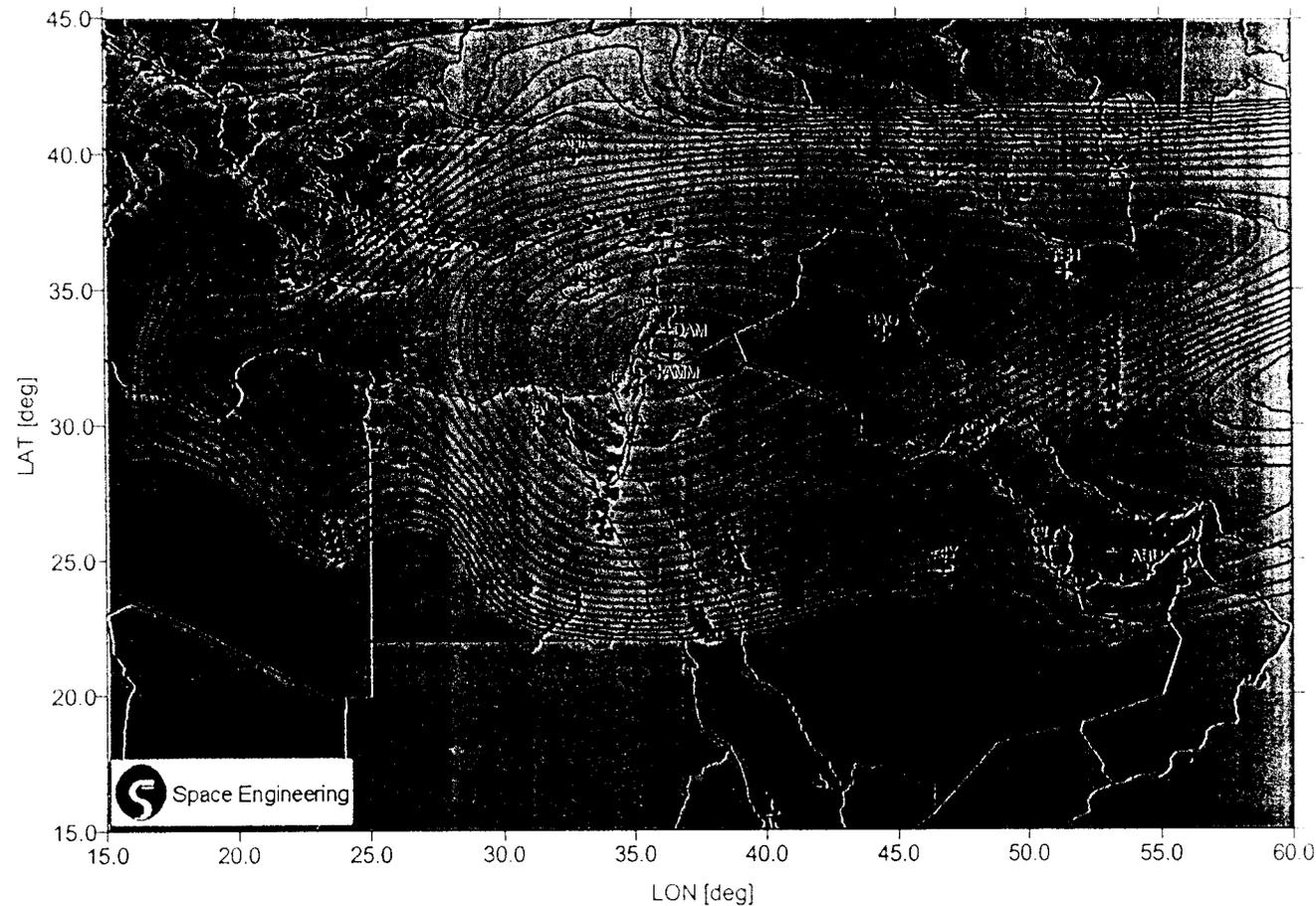
03-2



## Gain Contour Plots @ Geographical Coordinates (2/9)

- Middle-Eastern Beam, Horizontal Polarization, Up-Link

Amos-2 - BPE-Net Gain [dBi] Contour Plot - Middle-East Beam - Front Shell (FH\_opt#6\_01.MP4)  
Horizontal Polarization - Up-link (CH 15 - 14.12 GHz) - Peak Value: 42.21 dBi

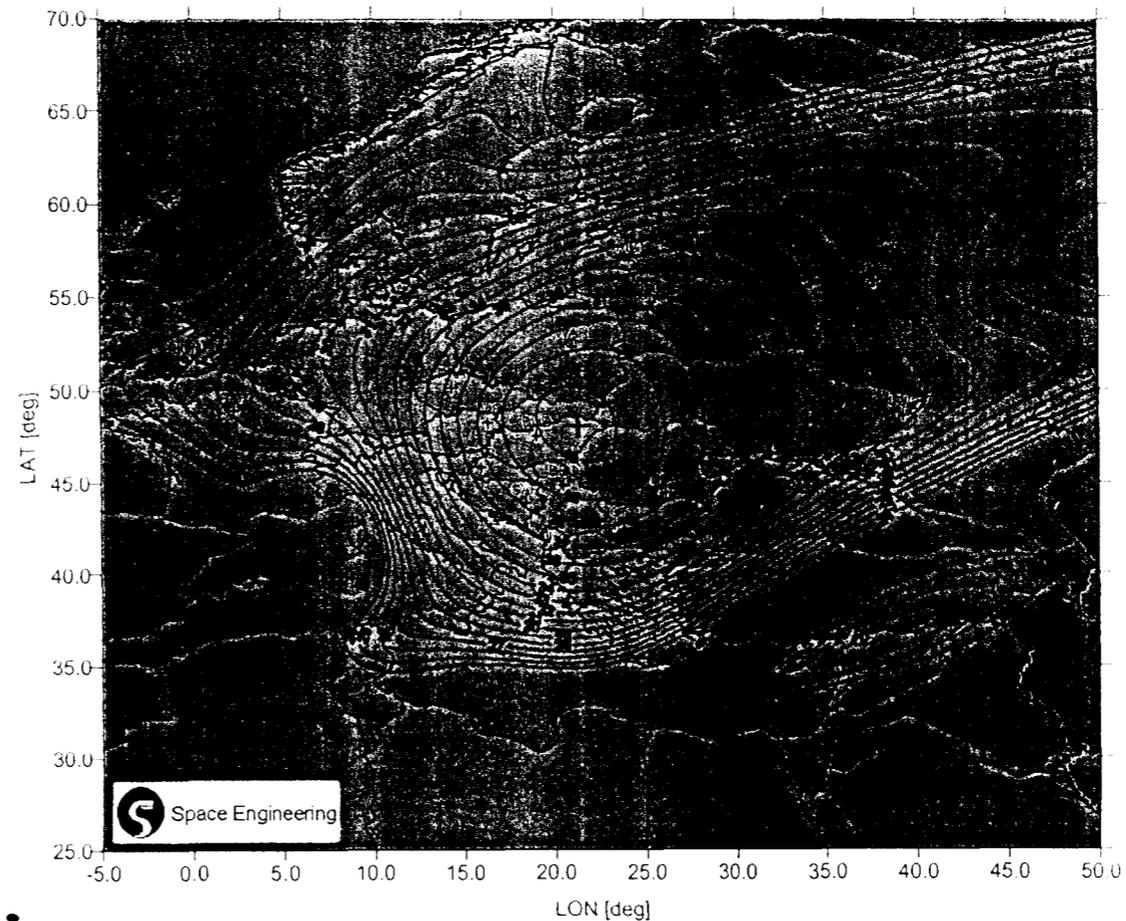




# Gain Contour Plots @ Geographical Coordinates (3/9)

- European Beam, Horizontal Polarization, Down-Link

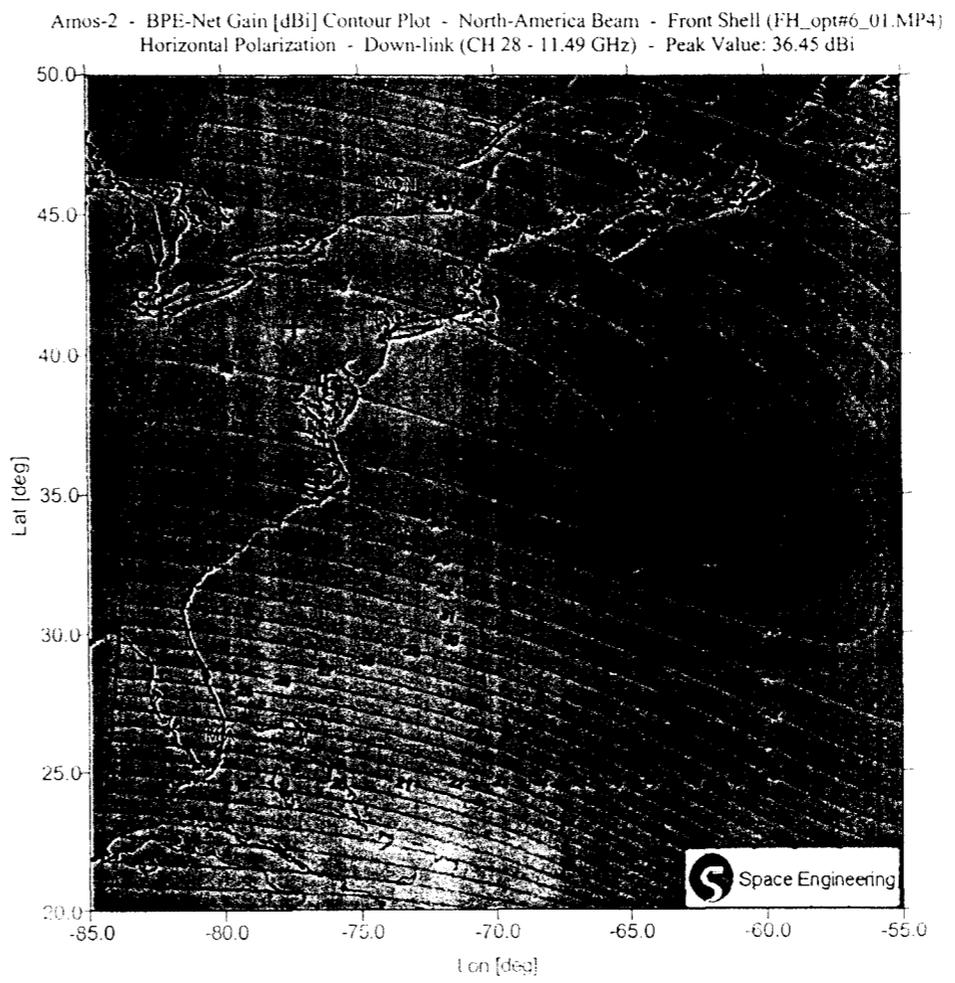
Amos-2 - BPE-Net Gain [dBi] Contour Plot - Europe Beam - Front Shell (FH\_opt#6\_01.MP4)  
Horizontal Polarization - Down-link (CH 23 - 10.82 GHz) - Peak Value: 40.51 dBi





# Gain Contour Plots @ Geographical Coordinates (4/9)

- North-American Beam, Horizontal Polarization, Down-Link

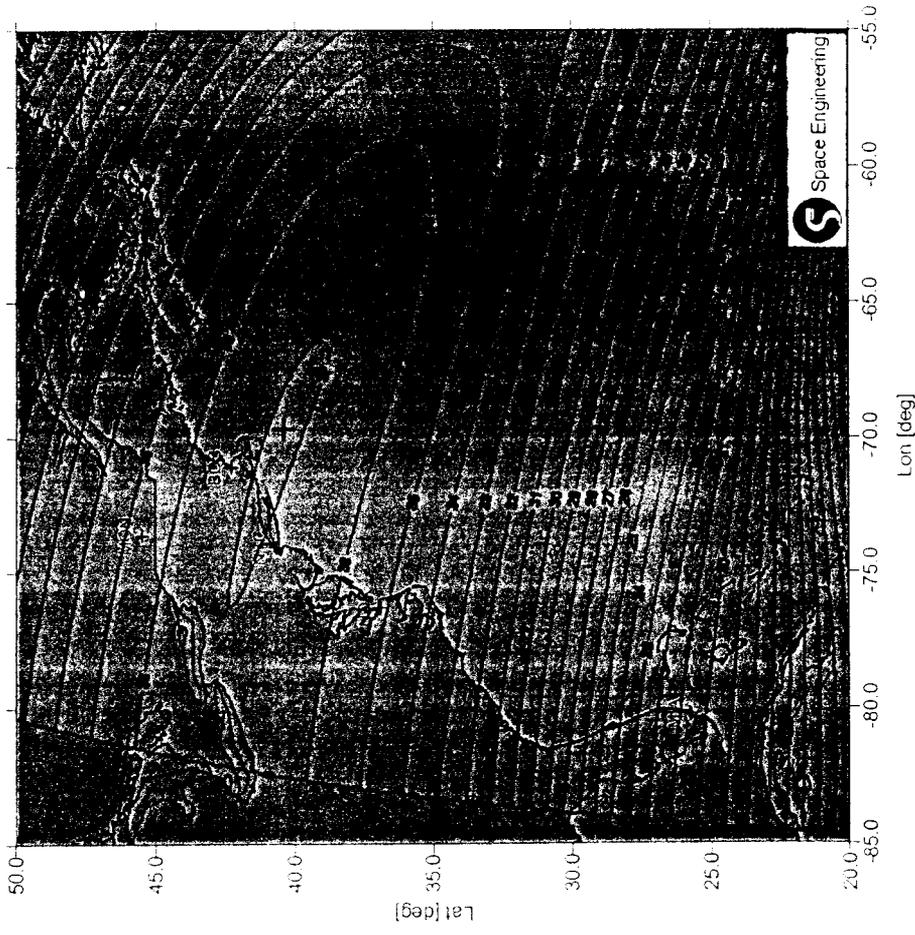




# Gain Contour Plots @ Geographical Coordinates (5/9)

- North-American Beam, Horizontal Polarization, Up-Link

Amos-2 - BPE-Net Gain [dBi] Contour Plot - North-America Beam - Front Shell (FH\_opt#6\_01.MP4)  
Horizontal Polarization - Up-link (CH 121/127 - 14.46 GHz) - Peak Value: 37.11 dBi



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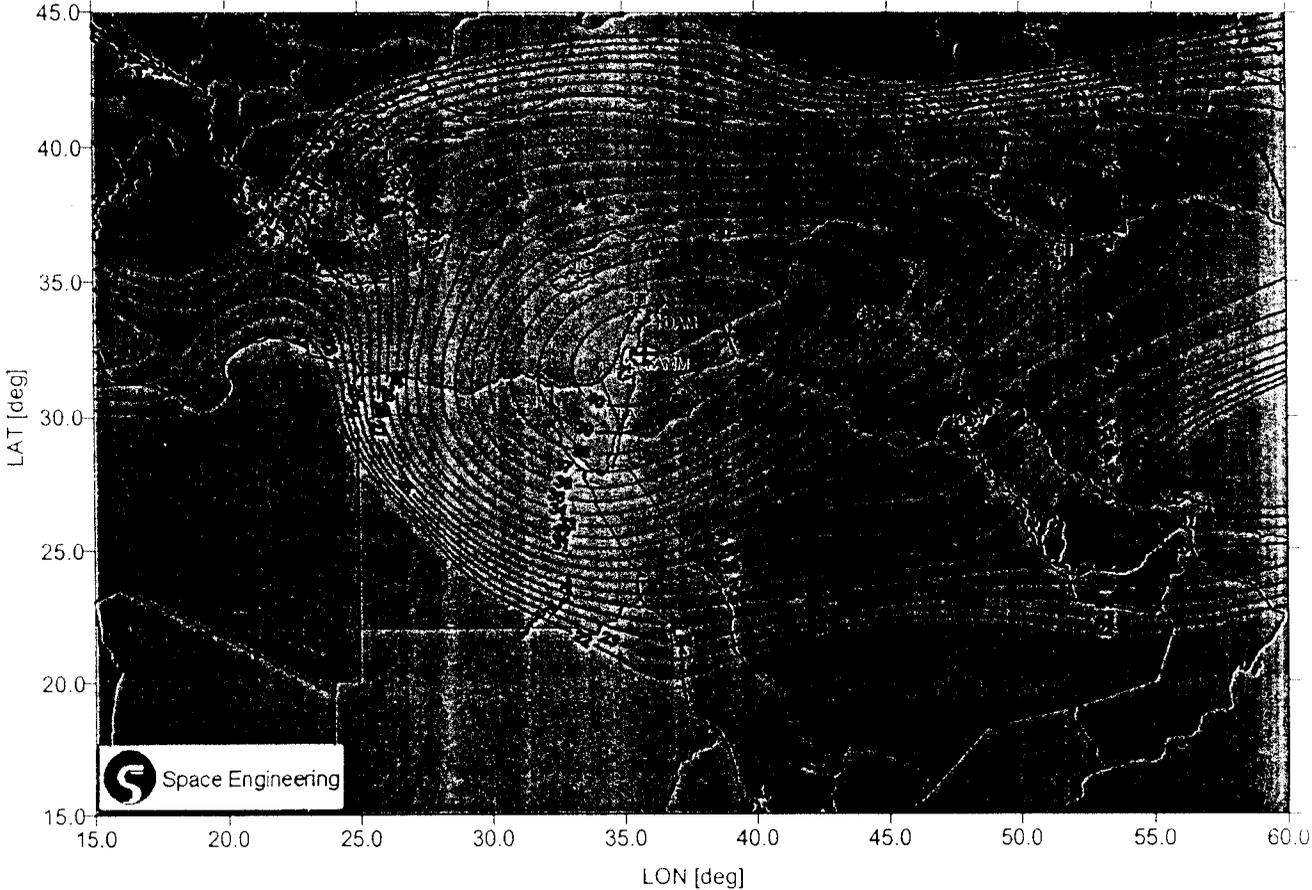
03-6



# Gain Contour Plots @ Geographical Coordinates (6/9)

- Middle-Eastern Beam, Vertical Polarization, Down-Link (10.7÷10.95)

Amos-2 - BPE-Net Gain [dBi] Contour Plot - Middle-East Beam - Rear Shell (RV\_opt#4\_03.MP4)  
Vertical Polarization - Down-link (CH 12 - 10.82 GHz) - Peak Value: 41.10 dBi

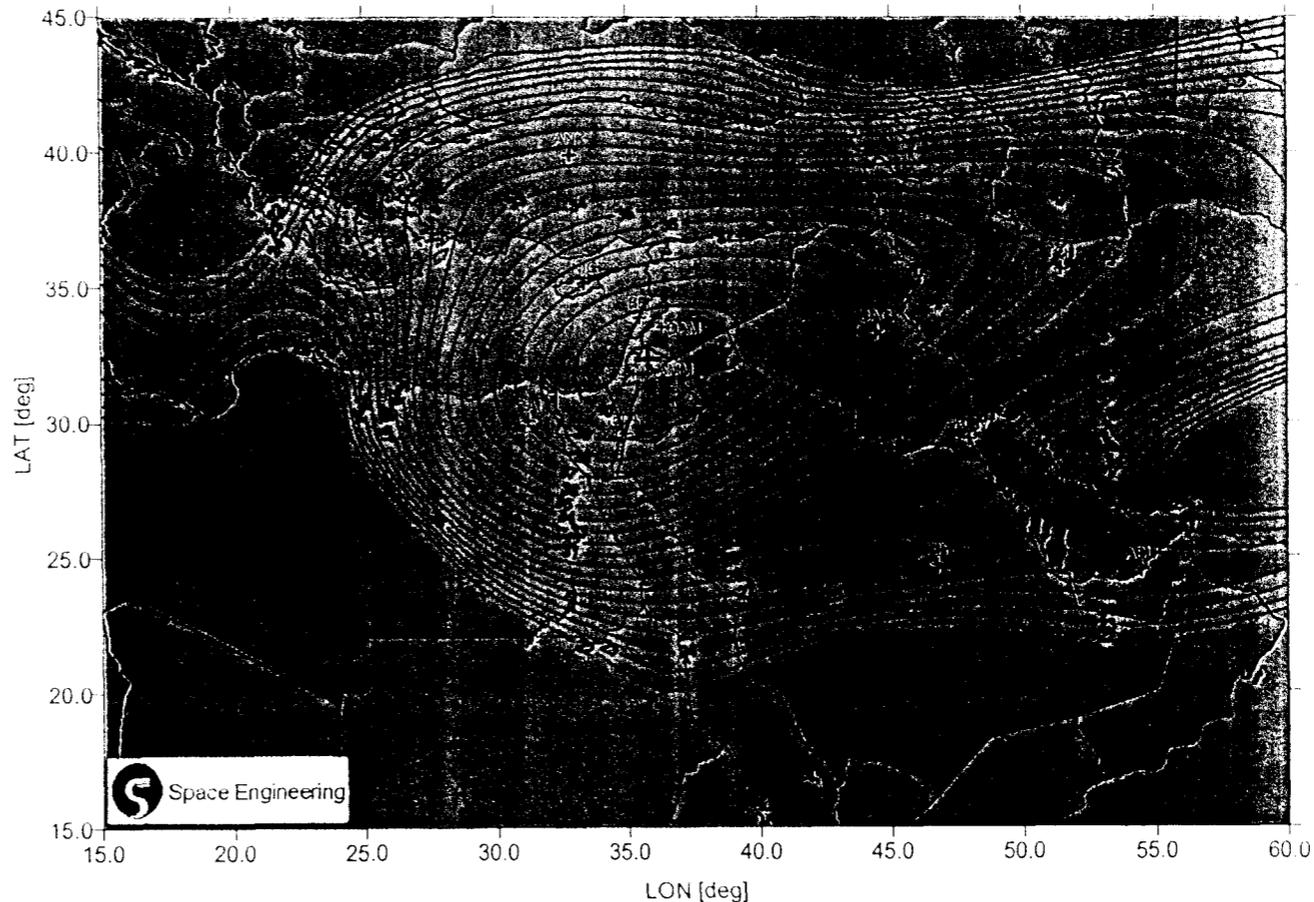




## Gain Contour Plots @ Geographical Coordinates (7/9)

- Middle-Eastern Beam, Vertical Polarization, Down-Link (10.95÷11.7)

Amos-2 - BPE-Net Gain [dBi] Contour Plot - Middle-East Beam - Rear Shell (RV\_opt#4\_03.MP4)  
Vertical Polarization - Down-link (CH 14' - 10.99 GHz) - Peak Value: 41.20 dBi

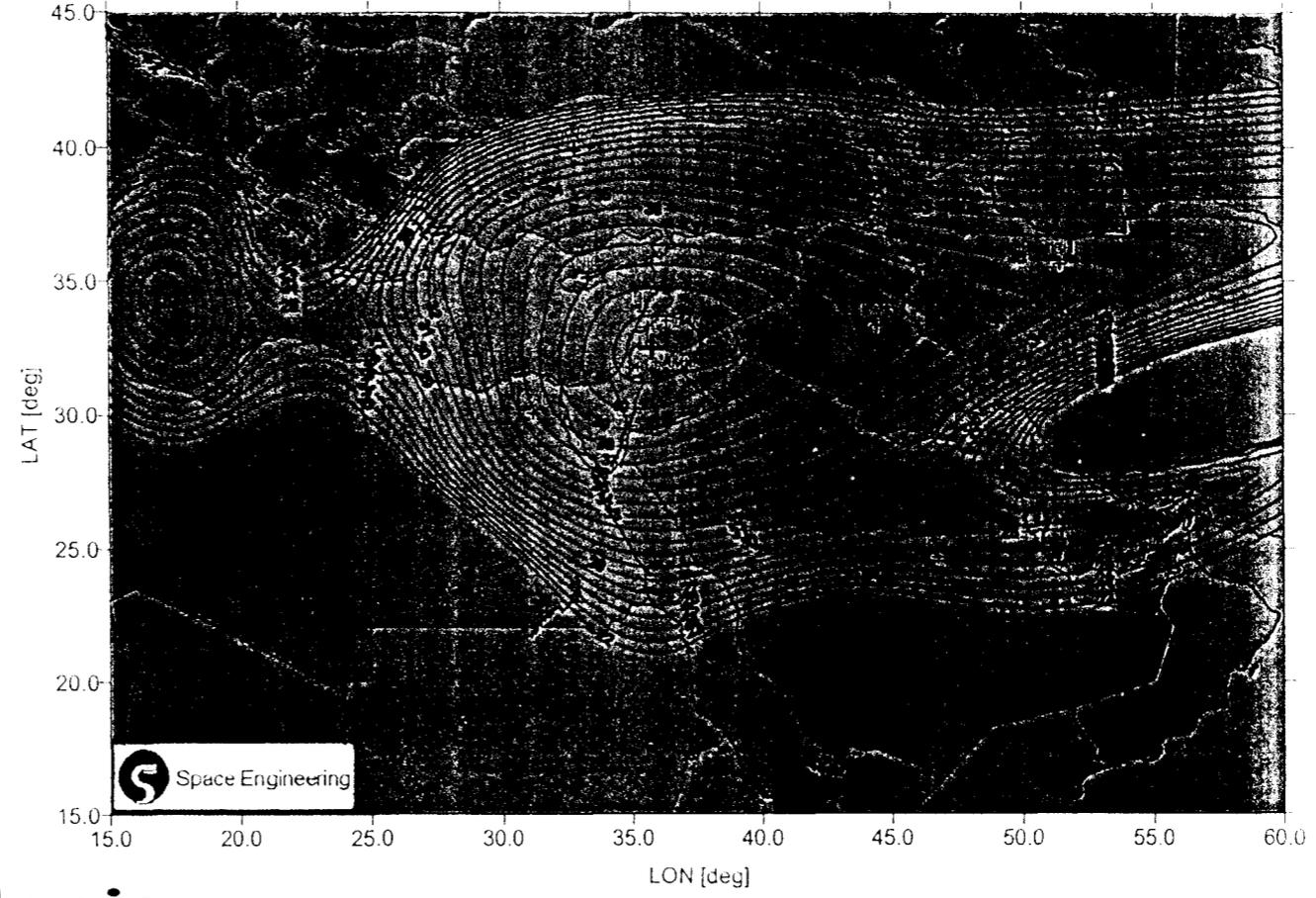




# Gain Contour Plots @ Geographical Coordinates (8/9)

- Middle-Eastern Beam, Vertical Polarization, Up-Link

Amos-2 - BPE-Net Gain [dBi] Contour Plot - Middle-East Beam - Rear Shell (RV\_opt#4\_03.MP4)  
Vertical Polarization - Up-link (CH 21 - 14.46 GHz) - Peak Value: 41.70 dBi

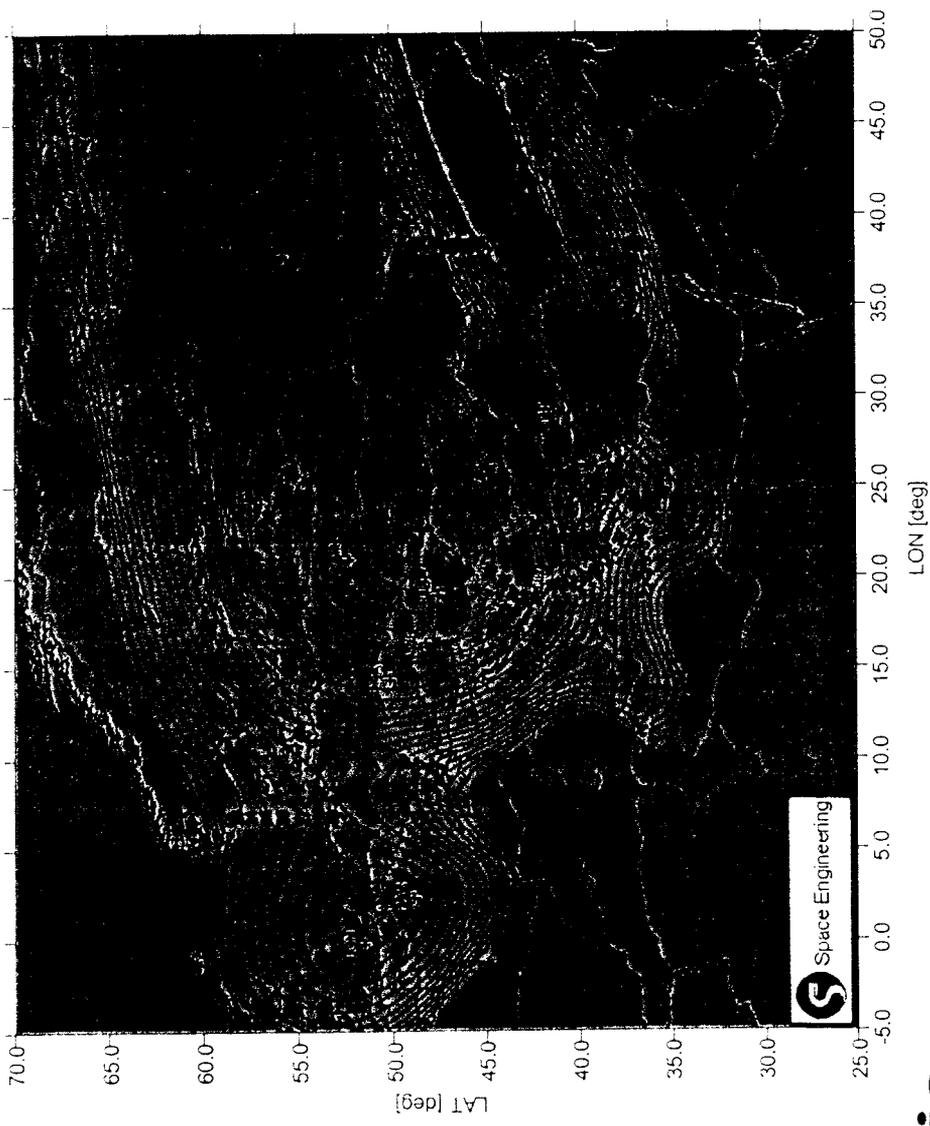




# Gain Contour Plots @ Geographical Coordinates (9/9)

- European Beam, Vertical Polarization, Up-Link

Amos-2 - BPE-Net Gain [dBi] Contour Plot - Europe Beam - Rear Shell (RV\_opt#4\_03.MP4)  
Vertical Polarization - Up-link (CH 27 - 13.96 GHz) - Peak Value: 41.78 dBi



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03-10